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ABSTRACT

This yearbook of the National Business Education Association contains twenty-three articles and is divided into five parts. The first part, entitled Managing Learning by Behavioral Objectives, contains articles on the theory of behavioral objectives, strengths and weaknesses of behavioral objectives, and the status of behavioral objectives in business education. The second part, Accountability in Business Education, deals with the theory of accountability in education, student and teacher accountability, administrator accountability, and employer accountability. Evaluation in Business Education, the third part, deals with the theory of educational evaluation, evaluating students, and evaluating teachers, as well as the implications of legislation relating to confidentiality of student records, and student follow-up and program evaluation systems. Part 4 contains three articles relating to testing programs. And the fifth part, Evaluation of Instructional Objectives Through Grading, contains articles on typewriting, the clerical area, stenography, accounting, business and economics, distributive education, cooperative programs, and business communication. (BB)

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# Evaluation and Accountability in Business Education

NATIONAL BUSINESS EDUCATION YEARBOOK, NO. 16

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# Part I

## MANAGING LEARNING BY BEHAVIORAL OBJECTIVES

### CHAPTER 1

## The Theory of Behavioral Objectives

**CONSTANCE H. KRAVAS**
Washington State University, Pullman

Within the pages of *Alice's Adventures in Wonderland,* there is a memorable exchange where Alice asks the Cheshire Cat for directions, not knowing which road to take. Their ensuing conversation goes like this:

> "Would you tell me, please, which way I ought to go from here?"
> "That depends a good deal on where you want to get to," said the Cat
> "I don't much care where—" said Alice
> "Then it doesn't matter which way you go."[1]

In contrast to Alice's situation, decisions about destinations and decisions about how to reach those destinations are critical in education. In many respects, the teacher preparing a unit of instruction is like a chef preparing a meal. To insure an interesting, appropriate, and palatable feast, the chef must first decide upon the type of meal that is needed. If a picnic is planned, different ingredients and recipes are required than if a six-course formal dinner is intended. Peanut butter-and-jelly sandwiches might be the *piece de resistance* at the outing. They could prove disastrous at the elegant banquet. Likewise, the educator must have a clear understanding of the intended outcomes of instruction before determining ways to help students get there. As Robert Mager pointed out 15 years ago in his influential little book, *Preparing Instructional Objectives,* if teachers don't have clear destinations in mind, they're likely to end up someplace else—and not even know it![2]

Successful instruction at any level involves helping students change. Each program, each course, each lesson is intended to foster some significant development in the learner. Students are expected to be different at the end of a unit of instruction than they were at its beginning. With such a premise as a basis, teachers must establish, as far as possible, the changes they seek to effect and specify the procedures that will lead to these outcomes. That is, they must set their *ends* and then select the *means* that will facilitate their attainment.

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[1]Carroll, Lewis. *Alice's Adventures in Wonderland.* New York: W. W. Norton and Co., 1971. p. 51.

[2]Mager, Robert F. *Preparing Instructional Objectives.* Palo Alto, Calif.: Fearon Publishers, 1962.

Certainly not all changes that occur in learners can be anticipated in advance of instruction. It is not possible, or even desirable, to specify all significant outcomes prior to the actual learning situation. Many things that are learned take place without the conscious desire of the teacher or the learner. However, the learning of most course work and related skills demands conscious intent. Thus, decisions about "where we are going"—the stating of goals and objectives—are crucial first steps in instructional planning. They enable educators to organize content into orderly and successive increments to increase the probability of student learning, they provide a sound basis for the selection of appropriate materials and teaching methods, and they serve as a guide for the evaluation of instruction.

The function of objectives as a prerequisite for planning and evaluating instruction can be demonstrated most clearly by presenting a diagram of the major components of the instructional process. Figure I shows this relationship between learning outcomes and the learning experiences that are provided. The diagram points out that the experiences provided in the instructional program, including subject matter, teaching methods, and materials, are not ends in themselves, but means to ends. Teachers and learners interact in the instructional process to facilitate the attainment of desired learning *outcomes*.

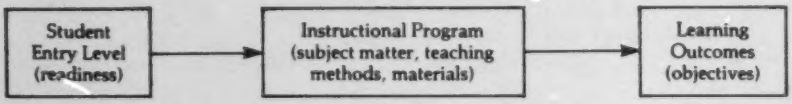
Student Entry Level (readiness)
Instructional Program (subject matter, teaching methods, materials)
Learning Outcomes (objectives)

FIGURE I.

Objectives are helpful in another way, also. They provide a framework for communicating the intents of educational programs to such interested groups as students, parents, instructors who teach preceding and subsequent units, and persons responsible for planning and evaluating curriculums.

## WHAT ARE OBJECTIVES?

Educational objectives are written by many different groups to suit many different purposes. Statements formulated by national curriculum commissions and by state boards of education are usually long range and inclusive in scope—for example, "to respect the uniqueness of each learner," "to use leisure time in positive and satisfying ways," "to be committed to lifelong learning and personal growth." Broad objectives of this type are usually referred to as *goals*. A goal is more abstract, more visionary than an objective. It is

> . . . something presently out of reach; it is something to strive for, to move toward, or to become. It is an aim or purpose so stated that it excites the imagination and gives people something they want to work for, something they don't yet know how to do, something they can be proud of when they achieve it.[3]

[3]Kappel, F. R. *Vitality in a Business Enterprise*. New York: McGraw-Hill Book Co., 1960. p. 38.

The purpose of goal statements is not to guide instruction and evaluation; they are not explicit enough to serve this function. Goals are designed, rather, to give direction to policy makers at national, state, and local levels.

Goals that are congruent with the interests and resources of state school systems and national committees, while effective in suggesting certain types of actions for local school boards and administrators to pursue, are much too general for organizing courses or for directing the activities of teachers and students. Aims must be translated into progressively specific outcomes. What the student and teacher both need are precise descriptions of the types of learnings anticipated from a particular unit. A specific educational objective, therefore, can be defined as a statement that communicates exactly what the student should be able to do after having completed the instruction.

The literature of education has been saturated with arguments in which the merits and disadvantages of such terms as "behavioral objectives," "performance objectives," and "instructional objectives" have been debated, sometimes quite heatedly. Although subtle differences can be drawn between these terms (e.g., "instructional objectives" sometimes depict teacher vis-à-vis student behaviors; "behavioral objectives" sometimes specify the methods of measurement, but do not add prerequisite and proficiency levels as do "performance objectives"), the differences are primarily matters of personal definition and preference. In the current chapter, thus, all three terms—behavioral objectives, performance objectives, and instructional objectives—are used interchangeably. In each case, they refer to educational statements that unambiguously delineate *intended learner outcomes.*

## HISTORICAL DEVELOPMENTS

Use of a means-ends, step-by-step approach to curriculum and instruction, where objectives are established, subject matter and teaching methods are selected, teachers and pupils interact, and finally, evaluative assessments are made to see if the objectives have been reached, is not a recent phenomenon of American schooling. The approach emerged as accepted professional practice early in the twentieth century through the work of early curriculum practitioners such as Franklin Bobbitt and W. W. Charters. But the method awaited widespread dissemination until 1949, when Ralph Tyler published his now classic treatise, *Basic Principles of Curriculum and Instruction.* The importance of carefully defining educational objectives is central in all of Tyler's teaching and writing. His rationale for curriculum development revolves around four central questions:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?[4]

[4]Tyler, Ralph. *Basic Principles of Curriculum and Instruction.* Chicago: University of Chicago Press, 1949. p. 1.

The most crucial step in this four-step curriculum development process is the initial one, since all the others follow from the statement of objectives. As Tyler explained, "All aspects of the educational program are really means to accomplish basic educational purposes. If we are to study an educational program systematically and intellectually we must first be sure as to the educational objectives aimed at."[5] These same objectives serve as guides to teachers in developing or selecting evaluation instruments to appraise the effectiveness of newly developed materials or teaching techniques.

Support for developing clear statements of educational outcomes came from several additional influences. In the early 1950's, test and measurement specialists, faced with the need to assess differences in student achievement levels began to emphasize the importance of measuring observable behaviors. A group of these evaluation experts, led by Benjamin Bloom of the University of Chicago, met in a series of work sessions that culminated in the publication of *The Taxonomy of Educational Objectives*—a book that brought considerable attention to the merit of formulating clear statements of educational goals and objectives.[6]

A related series of activities occurred in a different sector. During World War II and the Korean conflict, psychologists provided assistance in the training of military personnel. These program specialists incorporated statements of well-defined competencies into military training procedures. Further, the military psychologists developed a system of selecting the training objectives through a technique known as "task analysis." Task analysis involves describing the skill desired at the conclusion of a unit of instruction and then analyzing the repertoire of behaviors that sequentially lead to the attainment of the terminal performance. To use an analogy, when constructing a building, certain tasks must be completed in a sequential order. It would be foolish to attempt to shingle the roof before pouring the foundation. Similarly, learning is incremental. A student can only master content that is at the right level of difficulty—the preceding bricks must be in place to insure that the student is ready for the new task. The place for new knowledge to begin is where the student's current knowledge ends.

The military techniques spread quickly to other training areas where investigators were experimenting with programmed learning and, more recently, computer-assisted instruction. While the test and measurement experts had contended that the description of desired outcomes was crucial for the *evaluation* of instruction, persons involved with programmed learning added another dimension: behavioral objectives are necessary for *teaching* or even for the *planning* of instruction.

For educators, widespread interest and application of measurable learning outcomes awaited one more event—the publication of Robert Mager's programmed texts, *Developing Vocational Instruction* and *Pre-*

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[5] *Ibid.*, p. 3.

[6] Bloom, Benjamin S., and others. *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook I: Cognitive Domain.* New York: David McKay Co., 1956.

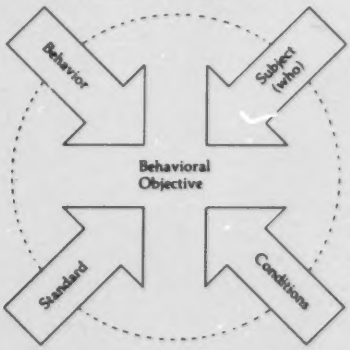
*paring Instructional Objectives.*[7] Partly because this was "an idea whose time had come," and partly because Mager employed an exceptionally clever writing style, numerous educators throughout the nation quickly heralded the stating of objectives and the development of new programs and evaluation techniques to support the attainment of these objectives as one of the most promising and potentially effective movements to reach the schools in years. For perhaps the first time, many teachers were required to answer the question, "What am I trying to do?" By the early seventies, the "age of Aquarius" had been transformed into the "age of accountability." In many schools, objectives were incorporated as an integral part of planning and evaluation in an attempt to satisfy the public's increasing demand to know more about the educational programs that received their support.

## WRITING BEHAVIORAL OBJECTIVES

Behavioral objectives can be written in many different ways. Mager outlined a three-component approach—Condition, Terminal Behavior, Criterion—to articulating student-centered objectives. Kibler, Barker and Miles defined five elements—Who, Actual Behavior, Results/Product, Relevant Conditions, Standard—in their model.[8] Crawford and his colleagues developed a clever mnemonic device, the "ABCD" method—*A*udience, *B*ehavior, *C*ondition, *D*egree—to help educators remember the four stages of their particular approach.[9]

Despite variations in style, format, and in the number of elements proposed, almost all models for composing well-written objectives offer similar prescriptive advice. They either state explicitly or suggest implicitly that a performance objective should answer the following questions:

1. *Who* will be performing the desired behavior?
2. What *behavior* will the learner demonstrate?




[7]Mager, *op. cit.*

[8]Kibler, Robert J.; Barker, Larry L.; and Miles, David T. *Behavioral Objectives and Instruction.* Boston: Allyn and Bacon, 1970.

[9]Crawford, Jack, editor. *CORD National Research Training Manual.* Second edition. Monmouth, Ore.: Teaching Research Division of the Oregon State System of Higher Education, 1966.

3. Under what *conditions* will the student be able to do this?
4. What *standard* will be used to evaluate the success of the performance?

When these questions are addressed within the framework of a complete objective, they form a sentence—including subject, verb, conditions, and standards. Let us consider each of these components separately.

*Who.* The "who" of a performance objective corresponds to the subject of the sentence. It focuses attention on the individual who will be mastering the task.

> The *student* will identify three criteria—function, size, and price—for purchasing office equipment and supplies.
>
> The *student* will type and complete a preprinted business form without any errors.

Notice that an objective is *not a statement about what the instructor will do or about what the course will cover.* It is, rather, a prediction of what the *learner* will do. This distinction is important. Even when the "subject" of the objective is not stated literally (e.g., "The objective is to type one page at 60 words per minute with no more than two errors), the *implied* subject is the student (e.g., [the student] is able to type one page. . . .). In this way, attention is centered on the learning act itself, not on the instructional activities or the curriculum materials used to facilitate that learning.

Objectives have not always been phrased in student terms. Statements like "The objective of this unit is to teach students about factors affecting credit costs" for example, have appeared frequently in textbooks and course syllabuses. Even today, it is not uncommon to see objectives of this kind, ones that prescribe teacher activities or course content. Although these descriptions can be used profitably for instructional planning, especially *after* performance objectives have been formulated, they should not be confused with student-centered objectives themselves. When student objectives and instructional activities are used interchangeably, an important distinction between teaching and learning is lost. Teaching is a "means," never an "end"; student attainments, however, can be both "means" and "ends." In education, there is a short, but insightful analogy that warns teachers to respect this distinction:

> The teacher who says he taught something
> But the student didn't learn it,
> Is like the salesman who says he sold something,
> But the buyer didn't buy it.
>
> Anonymous

Because the purpose of education is to effectuate student development and change, rather than to impart knowledge merely for the sake of imparting knowledge, the rationale for stating objectives in terms of *student* performance is compelling.

*Behavior.* The next component, the student's *behavior,* is perhaps the most critical element of the objective. It represents the verb—the action—of

the sentence. It specifies the kind of terminal performance that will be accepted as evidence the learner has mastered the intended outcome.

An effectively stated objective describes actions that are *precise, observable,* and *measurable.* Words such as "compare," "recite," "select," "solve," "write," and "construct" can be used in formulating clear objectives. They denote readily observable actions. Conversely, words like "understand," "know," and "appreciate," that encompass complex sets of skills and knowledge, while appropriate for general instructional goals pose problems for writers of specific behavioral objectives. The trouble with these terms is that they cannot be easily observed. It is difficult to see "critical thought" or "appreciation." In addition, not everyone agrees on their meanings; the terms are open to multiple interpretations. Different instructors may accept considerably different behaviors as "evidence" of "critical thinking," or "understanding." For one teacher, "general knowledge" of insurance contracts can be assumed for the student who can recite a list of various types of insurance contracts; for another, "general knowledge" presupposes that the student is able to interpret actual contracts and describe criteria for valid insurance contracts.

Of course, this does not mean we do not want students "to know," "to value," or "to understand" phenomena and concepts in the world around them. As mentioned earlier, these terms can be incorporated successfully into general goal statements where they provide overall direction to the instructional process. However, more specific behaviorally stated objectives need to contain active or operational verbs that explain the form that the understanding, knowing, and thinking will take. This characteristic enables them to be particularly effective aids to teachers in deciding exactly what will be taught, how it should be presented, what practice is appropriate, and what evaluation procedures should be used. In addition, it provides a vehicle for communicating precisely to others about the expected outcomes.

*Conditions.* The third element in a behavioral objective pertains to circumstances or restrictions under which the learner will be expected to demonstrate the desired task. The following are sentence stems in which the conditions have been made explicit.

> *Given a series of statements about business structures* (sole proprietorship, partnership, corporation), the student will indicate whether each is true or false.
>
> *Without the use of notes, textbooks, or other reference materials,* the student will . . . .

As these examples show, the condition frequently identifies the testing situation that will be used to assess learner attainment of the objectives. Many advocates of the behavioral objectives "movement" believe that congruence between objectives and evaluation procedures is considered not only useful, but indeed, imperative. These supporters maintain that it is not fair to expect students to behave in ways that are different from the ways they have been taught to behave. Statements that identify relevant conditions help to ward against this possibility in that, once stated, they serve to guide test formulation. The resulting examination situation closely parallels the practice situations under which the learning has taken place. Such

congruence removes ambiguity for the student who is participating in class or is preparing for an exam.

The teacher must be cautious in stating conditions, however, so that the objective does not prohibit transfer of the behavior to real life settings. Consider this example:

> The learner will complete an employer tax form, when given 20 minutes, no manuals, and a list of hypothetical income and expenditure data.

It is difficult to imagine a real-life situation as restrictive or limited as the conditions specified in this objective. When articulating conditions, thus, it is useful to ask, "Under what conditions will the student be expected to perform this task later in life?" Careful consideration of this question may increase the probability that the learning will be generalizable to other settings—ones beyond the classroom door.

*Criterion.* The final component of a behavioral objective is the *criterion* —the quantity and quality of acceptable performance for the learning activity. Included in the standards component might be phrases like " . . . with 80 percent accuracy," or "without any errors," and a complete objective might read as follows:

> Given a selectric typewriter, the student will type 75 words per minute for five minutes *with no more than one error per 300 words.*

The criterion enables the teacher to decide whether or not the student has attained the objective *sufficiently* to proceed to the next level of difficulty. The criterion also guides the effort of the student by clearly specifying the degree or level at which performance must be demonstrated.

To summarize, although there is no single best way to write a behavioral objective, a well-written statement informs the learner *who* is expected to perform the task and what *behavior* the student will perform at the end of the instruction. To be complete, the objective should also contain a specification of the important conditions under which the student will have to perform and, finally, a description of the criteria by which terminal performance will be judged.

*Writing objectives for higher-order skills and abilities.* The previously described approaches for stating objectives have entailed the enumeration of specific behaviors the learner will exhibit at the end of the instructional period. The tight precision of these approaches offers many advantages. Yet, this same feature also places some limits on their use. Norman E. Gronlund, in his book *Stating Behavioral Objectives for Classroom Instruction*, pointed out that while the systems advocated by Mager and others may be effective for teaching simple skills and concrete data, they are inappropriate for teaching higher-order skills and abilities. For more advanced learning at the conceptual, principle, and problem-solving levels, he recommends a different approach.

Gronlund's method entails two steps. First, a *general objective* is stated. The general objective purposely includes terms like "understanding," "appreciating," and "thinking." Second, the general objective is clarified by listing several learning outcomes which represent *examples* of the types of

performances anticipated of learners who master the general objective. His procedure results in statements such as the following:

1. Understands the meaning of technical terms.
   1.1 Defines the term in his own words
   1.2 Identifies the meaning of the terms when used in context
   1.3 Distinguishes between terms that are similar in meaning.[10]

When the instruction involves higher levels of thinking (e.g., application, analysis, synthesis, or evaluation, in the cognitive taxonomy developed by Bloom et al), it may not be possible to list all behaviors that could conceivably verify acquisition of the general objective. In this case, a *sample* of specific types of behaviors should be listed.

In Groniund's opinion, performance objectives, centering as they do on action verbs like "draw," "write," "recite," and "compare," are not only inappropriate for higher-order outcomes, they are also too specific to provide adequate direction for the teacher or the students during an entire course or unit. Even if the instructor develops an extensive series of specific objectives, this list does not necessarily lend the type of direction needed for sound course planning. Sometimes behavioral objectives actually impede curriculum decision making because they become ends in-and-of themselves instead of means toward more general and transferable educational goals. Unfortunately, because they are so easy to define, there is a tendency to overload the curriculum with these low-level objectives. Gronlund reminds teachers that more complex objectives, even though difficult to define, are certainly important from an educational standpoint. Business educators who want their students "to know ways in which interpersonal communication skills contribute to personal success and effective business operations" need not exclude this objective from the curriculum just because it is difficult to state in performance terms. Gronlund would argue that, once this type of general objective is stated, it is easier to identify the more specific indicators of student growth.

*The content of objectives.* Before concluding this section on the writing of behavioral objectives, one more point merits consideration. Objectives can be written in a proper format and still be ineffective. The *content* of an objective is even more important than its format. When making decisions about content, educators must carefully consider both what is *possible* and what is *desirable*. Student and teacher characteristics, and the structure of the subject matter itself, must be considered when determining which objectives are feasible. As one decides whether a possible objective is desirable, information about the needs and goals of society, including the local community, and philosophical questions about the aims of education merit careful thought.

## ARGUMENTS FOR AND AGAINST OBJECTIVES

The concept of behavioral objectives means many things to many

[10]Gronlund, Norman E. *Stating Behavioral Objectives for Classroom Instruction.* London: MacMillan, 1970. p. 4.

people. Strong feelings, both pro and con, have been expressed on all sides and the debate over their merits and weaknesses persists yet today.

*In the fall of 1962, James Popham,* a strong supporter of the proposition that instructional objectives should be stated behaviorally, took his case to the public. He issued a colorful bumper sticker containing the inscription: "Help Stamp Out Non-Behavioral Objectives."[11] But, while Popham and his colleagues, including Mager, McNeil, and Baker to cite but a few, were heralding behavioral objectives as the *sine qua non* of education, opponents were denouncing them just as fervently as "the new four-letter word of teaching"—"the B.O.'s of education."

Today, these attitudes have softened somewhat. Both proponents and antagonists have experienced some small success in influencing each other to modify original viewpoints. The bumper sticker has undergone several metamorphoses to now read "Help Stamp Out *Some* Non-Behavioral Objectives." Likewise, some of the most ardent antagonists now suggest that the issue is not *whether* or not behavioral objectives are good or bad, but *when* and *where* they can be used appropriately and effectively and when they cannot.

Because the debate for and against behavioral objectives continues, even if the furor has subsided somewhat, and because the questions raised by both supporters and critics provide valuable information about the suitability of behavioral objectives for particular situations, it is pertinent to consider some of these arguments.

## Criticisms

1. *Specific objectives severely restrict curriculum and instruction.* This first criticism relates to the degree of specificity of objectives. Despite attempts by Gronlund and others to subsume specific objectives under a more general verb, this point is still cause for concern. In practice, it is all too easy to lose sight of the more general intents, particularly when curriculum specialists have warned so persistently that objectives "must" be stated in specific terms if they are to be helpful. Hyman cautioned educators that, "Specific objectives lead to specific elements, and the net result is a loss of flexibility needed in a program serving a wide range of pupils varying in age, interest, and ability." Thus, though specificity in objectives may help in determining a focus, the same specificity may serve to restrict teaching in actual operation.[12]

Teaching and learning are dynamic, not static activities in which the relationships among variables is never known fully and where unanticipated outcomes frequently emerge. It is probably impossible for an instructor to identify all outcomes ahead of time. Objectives may not only require alteration during the actual classroom interaction, but other important objectives may be discovered during the instructional give and take. Prespecification

[11] Davies, Ivor K. *Objectives in Curriculum Design.* London: McGraw-Hill Book Co., 1976. p. 62.

[12] Hyman, Ronald T. *Ways of Teaching.* Philadelphia: J. B. Lippincott Co., 1970. p. 46.

of explicit outcomes may have the effect of inhibiting teachers from capitalizing on these unexpected, serendipitous learning opportunities.

2. *Objectives stress the most trivial and most immediate outcomes; important long-range goals are underemphasized.* In 1968, Popham delivered a widely acclaimed paper in which he outlined and then rebutted numerous reasons given by the "opposition" for not employing objectives. During his presentation, Popham admitted that even the most steadfast enthusiasts of behavioral objectives agree that the easiest kinds of pupil behaviors to operationalize "are usually the most pedestrian," that many examples "deal with the picayune."[13] He suggested further that Mager's programmed book describing the preparation of instructional objectives had unintentionally reinforced the writing of precise but unimportant objectives. "Almost all of Mager's examples deal with cognitive behaviors which according to Bloom's taxonomy would be identified at the very lowest level."[14]

Although Popham acknowledged this problem of triviality with precisely stated objectives, he countered the criticism, suggesting that the very fact that student behaviors are written explicitly permits the teacher to scrutinize them carefully and eliminate ones that are not worthy of educational pursuit. Instead of encouraging trite outcomes, he believes behavioral objectives have the reverse effect: They make it possible to identify and eliminate objectives that will *not* lead to important outcomes.

3. *Teachers do not specify objectives in terms of measurable learner outcomes, and it is unrealistic to expect them to do so.* Despite profuse acclamations of their importance, it is well known that many teachers simply do not formulate objectives and strongly resist pressures from administrators, parents, or colleagues in this direction. It is not uncommon for a teacher to devote considerable planning time to the selection of learner activities and yet fail to identify the specific learner objectives for which the activities are intended. Some instructors avoid behavioral objectives as a conscious decision—they believe they can only fully identify objectives while teaching a lesson, or upon the lesson's completion. For other instructors, no conscious decisions have been made with regard to objectives—stating them has simply not become a significant part of their procedures.

In his defense of behavioral objectives, Popham acknowledged that many teachers prefer not to specify them. However, he refused to shrug his shoulders in despair, arguing that, "There is obviously a difference between identifying the status quo and applauding it. Most of us would readily concede that few teachers specify their instructional aims in terms of measurable learner behaviors, *but they ought to.* What we have to do is to mount a widespread campaign to modify this aspect of teacher behavior. The way teaching really is at the moment just isn't good enough."[15]

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[13] Popham, James W. "Probing the Validity of Arguments Against Behavioral Goals." In Kibler, Robert J.; Barker, Larry L.; and Miles, David T. *Behavioral Objectives and Instruction.* Boston: Allyn and Bacon, 1970. p. 116.

[14] *Ibid.*, p. 116.

[15] *Ibid.*, p. 120.

4. *Teachers who devote themselves steadfastly to stating objectives (outcomes) are likely to lose sight of teaching as a process.* This fourth criticism centers on the relationship between the teacher and the learner and the many critical affective elements that permeate the classroom milieu. Teachers who view the achievement of prespecified objectives as supreme are likely to neglect some of the other factors that profoundly effect the ultimate attainments of each student. For example, the teacher might forsake a friendly, supportive, and warm interpersonal tone in which respect for the integrity and independence of the students is communicated. In an attempt to achieve cognitive outcomes, it is conceivable that an instructor might forget that many of the important long-range goals of instruction—especially humanistic aims, such as "development of positive self esteem" and "acceptance of people with different cultural backgrounds," are taught more implicitly than explicitly. The way the school *is*, the way the instructor *interacts* with the students—these aspects of the educational environment communicate messages as vividly as any written statements of intent.

5. *Because behavioral objectives are specified by teachers, learner dependency and conformity are fostered.* Although many teachers attempt to involve students in the planning process, countless others rely solely on their own initiative, judgments, and understandings about what students should learn. This tendency may be stimulated when objectives are selected prior to instruction. Hyman cautioned that it is particularly important for instructors at the secondary and college levels, where the development of independence and self-motivation are crucial, to encourage active learner participation in all aspects of instruction—planning, implementation, and evaluation. In addition to fostering dependence, Hyman noted that rigid adherence to prescribed objectives on the part of the instructor may cause students to deemphasize or disregard other unexpected outcomes or spontaneous events. Behavioral objectives, he warned, have a latent effect of " . . . restricting learning to a mode of dependence and expectedness (that) is important enough in itself to warrant serious doubt and restricted use of them."[16]

**Supportive arguments**

Proponents of behavioral objectives, both out of self-defense and conviction, have advanced many claims about their value and validity. At times, these claims have rivaled advertisements for magical elixirs in their ebullience—e.g., behavioral objectives have been variously described as "*the* answer to educational woes" and as "absolutely essential to sound practice." Popham rationalized his own strategy for counterattacking writers of nonbehavioral objectives by explaining that

> " . . . as a partisan in the controversy [the debate over behavioral objectives], I would prefer unanimous support of the position to which I subscribe. You see, the other people are wrong. Adhering to a philosophic tenet that "error is evil," I hate to see my friends wallowing in sin."[17]

[16] Hyman, *op. cit.*, p. 49.

[17] Popham, *op. cit.*, p. 115.

Tongue-in-cheek comments aside, behavioral objectives offer many potential benefits to students, teachers, administrators, parents, and interested citizens. The appropriateness and usefulness of objectives for each of these groups are presented briefly below.

1. *Behavioral objectives assist students.* One of the most convincing arguments for stating unambiguous behavioral objectives is that they may have direct effect on student learning. When a clear statement of desired terminal performance is provided, students are guided in their study. Guesswork and confusion are minimized. Because objectives indicate what the learner can expect to obtain from the instruction, students can devote their time to acquiring the specified behaviors. They can channel their energies to learn the most important material and skills.

Although the research on behavioral objectives is still in its infancy, a few studies have been conducted that analyze their effectiveness as aids to student learning. Mager and McCann found that giving students detailed statements of instructional outcomes can greatly reduce learning time. Similarly, Miles, Kibler, and Pettigrew reported that the students in their study performed better on objective tests when they were given behavioral objectives in advance of the instruction.

Behavioral objectives also profit students in a different way. They provide criteria for them to evaluate their own progress. The feedback is immediate. Each learner knows clearly how performance will be assessed and knows that it is, indeed, the performance rather than other intangibles such as "personality" that forms the basis for grading. Knowledge of tangible outcomes can have the positive effect of reducing generalized anxiety about course requirements and testing procedures.

2. *Behavioral objectives are valuable tools for teachers.* Objectives clarify the intent of the unit of instruction to the *teacher.* In turn, the teacher is more able to design instructional activities that lead progressively to the stated objectives. Objectives prompt teachers to clarify their thinking about curriculum content, separating the most significant aspects of subject matter from the ephemeral. Such planning prevents "shot-gun" or rambling instruction that wastes so much valuable time in the classroom. When instructors know precisely what they are trying to accomplish, they are more likely to stay on task and to relate spontaneous input to the objective, avoiding possible tangents that confuse learners.

Objectives also aid teachers in evaluating their own instruction. They are integral components of many accountability systems in that teachers are required to specify the criteria for acceptable student behaviors and to determine in advance how performance will be measured. At the end of the instruction, a clear picture of how well students have mastered the objectives emerges. At this point, the teacher is able to make critical decisions about where additional instruction is needed and where it is desirable to move on to new objectives.

3. *Objectives help administrators, in concert with teachers, to design and coordinate curriculums and to insure consistency and coordination between courses of study.* With the aid of clearly specified objectives,

curriculum planners can eliminate unnecessary overlap between courses, can identify gaps, and design curriculums that encourage the transfer of learning to new settings. In situations where the administrator is also a supervisor or teacher evaluator, the objectives help to determine if teachers are pursuing adequately the goals of the entire course or the goals of the school. In those cases where the objectives have been prepared by the teacher, the supervisor is able to gain insight into the particular instructor's aims and philosophy. They provide a vehicle for communication, thereby avoiding the nebulousness that characterizes many teacher-supervisor relationships.

4. *Behavioral objectives, when shared with parents and interested citizens, provide a valuable link between the school and the community.* In recent years, parents have become increasingly concerned about the quality of education received by their offspring. They want to know and in many cases want to help determine the types of *major* objectives sought. Although disseminating information about each specific behavioral objective undoubtedly would be impractical, if not undesirable, knowledge about major objectives can facilitate understanding between the school and the home. With this knowledge, parents can gauge the actual progress of their children much more accurately than if letter grades only are used to report evaluative information.

To conclude these arguments in opposition to and in support of objectives, one additional point merits attention. Wherever behavioral objectives are used, it is important to consider the more general issue of appropriateness. Rather than arguing that they are good or bad, it is constructive to think of objectives as more appropriate for some situations than for others. Like powerful drugs, objectives are neither helpful nor harmful forces in themselves. Their effects depend on how they are used. Clarity and explicitness are more likely to be suitable in one context than in another (e.g., in a typing course than in an art appreciation class). One of the critical tasks for any educator, therefore, involves recognizing where and how objectives can be employed effectively. The final section of this chapter raises some questions for instructors to use in making these important decisions.

## SELECTING AND EVALUATING BEHAVIORAL OBJECTIVES

The following types of questions need to be asked by teachers as they select and evaluate objectives. Together, they constitute guidelines that can be used profitably when attempting to implement behavioral objectives in an effective manner.

1. Do the objectives indicate relevant and appropriate outcomes for the instructional unit?
2. Do the objectives contribute to the attainment of a goal or goals that are potentially significant in terms of the present and future needs of society and the learner?
   a. Are the objectives consistent with the general philosophy of the school?
   b. Are they in harmony with sound principles of learning—transfer, readiness, motivation, and retention?

3. Are the objectives comprehensive of all types of learning outcomes?
   a. Are varying types of objectives included—cognitive, affective, and psychomotor?
   b. Are varying levels of complexity included—e.g., knowledge comprehension, application, analysis, synthesis, and evaluation?
4. Is the meaning of each objective sufficiently clear?
   a. Is the meaning clear to students, teachers, parents?
   b. Is it complete, yet concise and to the point?
5. Are the objectives attainable? Do they take into account the abilities of the students, teacher skills, materials, facilities, and time available, etc.?
6. Are the objectives stated in a consistent and effective form, including such components as subject, verb, conditions, and standards?
   a. Are the outcomes of the learning identified, rather than the methods used to attain them?
   b. Are observable and measurable student behaviors specified?
   c. Are the relevant conditions included?
   d. Are the evaluation criteria easily recognized?
7. If the Gronlund format is used,
   a. Are the general objectives readily subdivided into component specific objectives?
   b. Do the specific objectives adequately represent the general terminal behavior?
8. Does the list of objectives contain some outcomes that allow for varying degrees of individual development?
9. Are the objectives at the right level of difficulty for the learner?
   a. Has the learner already attained the objective?
   b. Does the student first need to attain essential prerequisite skills?
10. Can learning experiences be identified that will facilitate learner achievement of each objective? Does the instructor organize the instructional process around the objectives?
11. Is the list of objectives so long and cumbersome that it defeats even the most conscientious learner or teacher?

In conclusion, the stating of behavioral objectives has become an integral component of instruction for many educators. Specific descriptions of learner outcomes have been used to assist teachers in planning, to assist students in learning, to assist administrators and teachers in designing curriculums, and to foster closer communication between the school and the community. Despite widespread enthusiasm for objective-based planning and instruction, however, the alleged rewards for their use have not always materialized. On the contrary, overenthusiastic and undersupported efforts sometimes have resulted in confusion and frustration on the part of students and teachers—particularly when important questions about the content and format of the objectives have not been addressed adequately. Nevertheless, the internal and external needs which precipitated the birth of this movement persist and continue to accelerate.

CHAPTER 2

# Strengths and Weaknesses of Behavioral Objectives

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A significant trend in business education is stating in behavioral terminology what business students are expected to learn in business classes. Robert F. Mager's *Preparing Instructional Objectives*[1] is devoted to helping educators formulate and communicate teaching objectives in terms of performance that students will be able to demonstrate when they have completed a course of study. Mager's behavioral approach to formulating objectives has penetrated the business education instructional process at all levels. Many business educators have been engaged in the process of preparing and using behavioral objectives for classes. Other business educators are talking about behavioral objectives, while a few are actively fighting behavioral objectives.

What conclusions can be drawn about writing and using behavioral objectives in business education? The professional literature contains evidence that behavioral objectives possess certain strengths as well as certain weaknesses. Typical strengths and weaknesses appearing in business education literature are reviewed in this chapter. Those cited are by no means all of the strengths and weaknesses of behavioral objectives, but they do reflect the more common ones. This chapter provides business educators with an opportunity to identify the strengths and weaknesses associated with the development and implementation of behavioral objectives.

## WEAKNESSES OF BEHAVIORAL OBJECTIVES

Before reviewing the major strengths, examine the following weaknesses involved in writing and using behavioral objectives. Many weaknesses are the result of misunderstanding on the part of business educators and can be resolved with some effort; others are much more difficult to resolve. It is quite possible that before business educators come to terms with these weaknesses, they will need to revise their ideas about the development and implementation of behavioral objectives.

*There is a tendency to emphasize the psychomotor and cognitive domains more than the affective domain.* A number of business educators are using behavioral objectives that tend to concentrate exclusively on areas that can be easily measured. Apparently, this weakness is related to the ease of evaluating psychomotor and cognitive learning as opposed to affective

[1]Mager, Robert F. *Preparing Instructional Objectives.* Second edition. Belmont, Calif.: Fearon Publishers, 1975.

learning. Behavioral objectives can be written more easily when the business areas being learned are in the psychomotor domain, where behaviors are easy to observe and measure. Behaviorally stated objectives in the cognitive domain are also relatively simple to write and use because specific knowledge can be identified and measured. However, the psychomotor and cognitive domains constitute only one part of the learning process. Based on skills and knowledge attained in the psychomotor and cognitive domains, business students should progress completely through the educational process, which also includes the affective domain. If business educators are concerned with the broad aspects of business education, they should develop the ability to state objectives in behaviorally stated terminology for all three domains.

The affective domain is somewhat difficult for business educators to manipulate because it involves the emotional processes of business students, which are much more subjective when it comes to evaluation. Affective goals are not easy to describe behaviorally because these educational outcomes cannot be expressed easily in terms of observable behaviors. Because the emotional processes are difficult to define, some business educators do not attempt to define such types of behavior; thus, their effectiveness is limited in guiding students to achieve objectives in the affective domain.

To combat this weakness, business educators should make a critical analysis of their subject areas and more clearly define behavioral objectives for the affective domain. Only if these objectives are clearly defined can instructional strategies be properly selected, utilized, and evaluated in business classrooms. If business teaching is to improve in the areas of values, appreciations, attitudes, and interests, business educators must expend the effort necessary to define these areas of the affective domain. Affective goals are not easy to specify, but business educators can describe what students will be doing when demonstrating that they understand or appreciate certain things. They may need to write several specific statements to communicate the intent of one behavioral objective, and even though it is time consuming, it can be done.

Furthermore, business educators cannot communicate to students about objectives in the affective domain unless they communicate in language that students can understand clearly. Only to the extent that objectives in the affective domain are communicated in terms of precise goals will they be useful in the teaching situation. A comprehensive analysis of the taxonomies prepared by Bloom,[2] Krathwohl,[3] and Simpson[4] will help alleviate this weakness of behavioral objectives. A number of business educators have discovered that these taxonomies provide a systematic approach in establishing behavioral objectives for all three domains for business education programs.

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[2]Bloom, Benjamin S., and others. *Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook I: Cognitive Domain.* New York: David McKay Co., 1956.

[3]Krathwohl, David R.; Bloom, Benjamin S.; and Masia, B. B. *Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook II: Affective Domain.* New York: David McKay Co., 1964.

[4]Simpson, Elizabeth J. *The Classification of Educational Objectives, Psychomotor Domain.* Urbana: University of Illinois Press, 1966.

*There is a tendency to emphasize the lowest levels of the cognitive, affective, and psychomotor domains.* This weakness usually occurs because the behavioral analysis procedure for classifying and developing a hierarchy of objectives for each domain within a business course is difficult for some business educators to follow. Whether because of (1) problems in analyzing the behaviors involved in an objective, (2) lack of endurance required for obtaining a complete set of behavioral objectives, (3) inadequate preparation of subject matter of business courses, or (4) lack of knowledge about how real learning takes place, some business educators are developing the essential sequences of behavioral objectives for only the lowest levels of the three domains.

To overcome this weakness, business educators should begin with general statements of what they want students to achieve and then state the prerequisites for these statements. After using this sequence in the classroom, they should repeat this procedure until all capabilities are listed for all business students entering a business program. Eventually, this analytic procedure will produce an organizational pattern relating each behavioral objective to its prerequisite objective. All essential sequences among the behavioral objectives should be defined, progressing from the simple to the more complex, breaking each task down into its component steps. As teachers use this procedure for each business course, ultimately, behavioral objectives may be developed in a hierarchial continuum in all three domains for all business programs.

Perhaps an observation is necessary at this point. It appears that the upper levels of the affective domain are seldom used at the instructional level. Therefore, business educators may find these upper levels inappropriate for use in writing behavioral objectives to be achieved over short time periods. A number of business educators are finding these levels more appropriate for use in developing behavioral objectives to be achieved over longer time periods. Also, in the actual instructional process, it may not be necessary to begin teaching at the lowest level in all three domains. Nor will all business students necessarily progress through all levels in the hierarchial continuum of the three domains. Nor will all business educators use all three domains at the same level at the same time. To give broad coverage of a subject area, business educators should be careful, when writing and using behavioral objectives, to include all levels in all domains. Then they should make an effort to operate at the higher levels of learning rather than concentrating on the lower levels.

In addition, it is imperative for business educators to remember that behavioral objectives are not intended to impose maximum learning limits. The purpose of behavioral objectives is to establish minimal objectives of classroom behavior. Therefore, when sequencing objectives, business educators should provide minimal behaviors; then students should be held responsible for acquiring these minimal behaviors. From these minimal behaviors, the individual business educator can add other behaviors that enable students to qualify for higher grades by performing at greater levels of achievement.

Although the behavioral objectives approach may lead to undue emphasis on the lower levels of the cognitive, affective, and psychomotor domains by some business educators, a close examination reveals that this weakness can be overcome and used advantageously if business educators really care about helping students. Business educators can—through such activities as in-service education and graduate study—develop a better understanding of and greater expertise in developing and implementing behavioral objectives for all three domains.

*Formulating behavioral objectives is more difficult for basic business subjects.* Few business educators who have worked with behavioral objectives will admit that behavioral objectives are as easy to write for basic business courses as for skills subjects. Possibly, this weakness results as much from disagreement among basic business educators as to what is to be taught as it does from the limitations involved in the behavioral approach to formulating objectives. Once agreement is achieved among basic business educators concerning the definition and selection of behavioral objectives, especially in the complex thinking areas, objectives can be stated behaviorally for these courses. Even though it may not be as easy to write behavioral objectives in this area as it is for skills areas, many business educators are writing them for basic business courses.

There are a number of sources that are helpful to basic business educators who want to build a comprehensive list of behavioral objectives. An analysis of leading textbooks and educators' manuals is a good beginning. Also useful are the publications of the Joint Council on Economic Education, the pronouncements of the Policies Commission for Business and Economic Education, and the publications of the President's Council on Consumer Education. All of the foregoing documents will be helpful; however, basic business educators should tailor the objectives in these sources to the specific needs of their particular students. When behaviorally stated objectives are adequately prepared, many business educators discover that they are much easier to implement.

Business educators are having problems writing behavioral objectives in the basic business areas because they have been so accustomed to writing objectives in the traditional way that it is extremely difficult for them to define objectives in behavioral terms. Even those basic business educators who accept the concept of writing and using behavioral objectives for their subjects find that it requires a special kind of thinking to perform these tasks. While it may not be easy for some educators to modify their thinking, it is not impossible. Many basic business educators begin by stating all of the major outcomes of basic business courses in very broad behavioral terms. The general behavioral objectives can be followed by more specific objectives which show the students how they can achieve the general behavioral objectives.

Likewise, proficiency measurement of student behavior in basic business is difficult. This difficulty lies in developing measures of student behavior for basic business subjects that ascertain whether students have mastered current learning goals and whether they are ready to achieve new

goals. This is, of course, the major thrust of the behavioral objectives approach. Possibly, the reason some basic business educators are experiencing difficulty in achieving this type of measurement is because they tend to ask students to talk about behavior rather than to demonstrate it. Behavioral objectives for basic business subjects will be useful to the extent they specify what business students must be able to perform when they demonstrate mastery of the objective.

Then there is the additional problem of getting representativeness of the behavioral measure. Each measure of student achievement should be an example of the type of behavior emphasized in the basic business teaching situation. It cannot be an example of something else and still test for the behavior the basic business educator is trying to teach. It is important that the evaluation standard demand the same kind of behavior as was specified in the behavioral objective. Thus, the crucial issue is whether having passed a particular test the business students have demonstrated that they have accomplished what they set forth to learn. Acquiring this kind of representativeness for basic business behavioral measures is not easy. Basic business educators need practice in the skill of developing items that are relevant to their behaviorally stated objectives. Background reading, observation of basic business classes utilizing the behavioral approach to formulating objectives, and participation in behavioral objectives workshops are all good methods of preparation. Formulation of worthy behavioral goals for basic business classes is a rigorous task confronting business educators, but it is a skill which a number of basic business educators are developing and using.

Other basic business educators have subject areas in which content is constantly changing or have areas in which goals cannot be specified with a high degree of precision. These areas do not lend themselves easily to the behavioral objectives approach. If basic business educators find areas in which content is constantly changing, they should try to develop some way of measuring it. Business educators should be able to find a way to evaluate topics that they believe are important enough to spend a significant amount of time teaching in the classroom. Because it is not always possible to specify behavioral objectives with as much detail as one would prefer should not prevent business educators from trying to communicate as completely as possible with students what they should be trying to learn.

In certain situations, it is possible that the development of behavioral objectives will not be economically feasible. If so, behavioral objectives should not be used. However, this should not prohibit basic business educators from using behavioral objectives in other areas of that particular course. Basic business educators should explore all possibilities of developing behavioral objectives for improving learning in the basic business subjects.

*Behavioral objectives have a tendency to restrict the instructional process.* Since business students are progressing toward common behavioral goals, there is a tendency for some business educators to prescribe a common set of learning activities. This practice ignores all that business educa-

tors know about individual differences; i.e., different students achieve instructional objectives in different ways. These business educators are disregarding current research that indicates that effective learning requires flexible instructional methods.

Use of behavioral objectives will not restrict the instructional process if behavioral objectives are stated in terms of learning content only. Behaviorally stated objectives were not intended to specify the teaching methods business educators should use to achieve classroom goals. Therefore, business educators should feel restricted if they are told to accomplish behavioral objectives in a particular instructional method when any one of a number of teaching strategies might be utilized to help business students achieve certain knowledge, skills, and attitudes.

Business educators should be able to select teaching strategies they feel will be most effective for each learning situation. When developing behaviorally stated objectives, business educators should simply prescribe curriculum limits. They should not infringe on the rights of business educators to select freely the means of achieving the specified objectives. The variables of student characteristics, physical facilities, business educator expertise, and the educator's desire to try something different should be taken into consideration when behavioral objectives are used. Behaviorally stated objectives are merely teaching tools that help business educators in the instructional process.

*Behavioral objectives have a tendency to infringe upon the academic freedom of business educators.* This weakness appears to surface in the behavioral objectives approach when course content is imposed on business educators by someone else who is telling them what they should teach. A number of business educators feel that the concept of behaviorally stated objectives promotes such infringement; therefore, they view behavioral objectives as a personal affront when asked, after several years of teaching experience, to start using them. In such a case, the weakness really concerns curriculum content, not the behavioral objectives approach.

To avoid this weakness, business educators should be involved in the decision-making process when determining and using behavioral objectives. The behavioral objectives approach should not be mandated. The manner in which the behavioral objectives procedure is implemented is crucial to how business educators feel about academic freedom. Furthermore, the business educators who use them should be involved in the process of constructing behavioral objectives. They should help select those facts, understandings, skills, and attitudes they feel are important in the courses they teach. When business educators are included in the selection of the objectives to be included in their courses, their academic freedom is not endangered. However, if business educators are to select, write, and implement behaviorally stated objectives successfully, they need in-service training in the behavioral approach to curriculum building. School districts report they have received rich dividends from the time and money invested in workshops that prepared business educators to incorporate the behavioral objectives approach in the instructional process.

*Writing behavioral objectives is a time-consuming process.* Behaviorally stated objectives are not constructed quickly and easily for every business course. It takes time for some business educators to adjust to the special kind of objective thinking required for preparing concise, clearly stated behavioral objectives. Furthermore, this approach usually requires a number of writing and testing sessions to acquire a complete set of effective behavioral objectives for each business course.

Before implementing the behavioral approach, business educators should examine all the business courses they teach to determine the value of using behavioral objectives and the extent to which they are necessary for each business course. To save time, they should determine just how extensive a set of objectives is necessary and avoid writing wordy, voluminous, or encyclopedic objectives. They might save time by examining the traditional objectives that may already be on file in the business department. Behavioral objectives are really an extension of the specific objectives that are being used in many business classes. In fact, business educators have actually been stating objectives behaviorally for many years. The basic Magerian concept that education should be directed toward behavioral goals is not really a new theory for some business educators. Research indicates a great many business educators have been striving for behavioral responses, in theory at least, and have been using rather clear behavioral goals for a number of years. Only a minimal amount of rewriting may be necessary to get the objectives in an up-to-date format. Although the task of writing behaviorally stated objectives can be a time-consuming process, a business educator may wish to start by designing them for a single business course. Beginning typewriting is an excellent place to start. With this initial experience behind them, business educators may wish to develop behavioral objectives for other courses on a gradual, scheduled basis. Developing and implementing behavioral objectives for even one class is better than not using them at all. A number of business educators believe the dividends that accrue to business students are worth the time that educators must invest in writing behavioral objectives.

The foregoing weaknesses of behavioral objectives can create complications for some business educators; however, business educators should not reject the entire behavioral objectives approach solely because of them. These weaknesses present a challenge for business educators as they begin the task of formulating and implementing behavioral objectives in the business classroom. They should not let such weaknesses obscure the real strengths of the behavioral approach to formulating objectives.

## STRENGTHS OF BEHAVIORAL OBJECTIVES

A fundamental aspect of teaching business subjects is formulating worthwhile objectives. Just as educational objectives are useful to business educators to help determine the nature of the business curriculum, so do these objectives guide business educators and students in the selection and organization of learning strategies and in the evaluation of these learning

experiences. Actually, objectives constitute the hub around which all curricular, instructional, and evaluative experiences revolve. Unless these objectives are stated in meaningful terms, they do not serve a worthwhile purpose. Although most business educators acknowledge the importance of objectives, a great many educators do not use them effectively as a guide for selecting appropriate curricular, instructional, and evaluative activities.

Business educators should assess the following values that may accrue from using behaviorally stated objectives in business education programs. If applied properly, behaviorally stated objectives can be used as a basis for making effective decisions about curriculum, instruction, and evaluation in the business classroom. They provide a solid basis for improving the entire educational process. These strengths appear logical and reasonable to numerous business educators as they strive diligently to implement the behavioral objectives approach in business classes.

*The behavioral approach provides a solid basis for improving the curricular process.* The use of behavioral objectives, as originally perceived, is detailed, precise curriculum planning—deciding what business educators are going to teach and then determining the terminal behavior of the business students before the teaching process begins. Behavioral objectives, as defined in this context, are a necessary and important part of the business education curricular process. They permit business educators, students, administrators, and parents to know what is being taught in the business classroom. Behavioral objectives become the vehicle by which the business education curriculum is meaningfully communicated to all groups involved in the educational process. Thus, the formulation and communication of behavioral objectives is an important step in improving the curriculum process. Behavioral objectives pinpoint a clear relationship between stated goals and what is taking place in the business classroom.

Likewise, the behavioral objectives approach assists business educators in selecting those topics for inclusion in the business curriculum that are worthy of instructional effort. Business educators can use behavioral objectives to identify those ideas, skills, and attitudes that are most worthwhile to the students and include them in the business curriculum. At the same time, business educators can identify those learnings that are not so meaningful and eliminate them from the curriculum. Thus, the drafting of behavioral objectives causes business educators to think seriously about what should be included in the business curriculum.

Furthermore, overlapping of subject matter in the business education curriculum can be greatly reduced if business educators prepare behavioral objectives. Terminal behavioral objectives for all business programs can be compared. If certain objectives are being achieved in one program, they can be eliminated or curtailed in others. Such a comparison will enable business educators who teach in related areas to have a more precise understanding of what is being taught by other educators. They can then deploy their efforts more systematically to avoid overlapping subject matter.

Business educators who have developed behavioral objectives for the business education curriculum report the experience has been rewarding.

They now have a vehicle by which the strengths and weaknesses of the entire business curriculum can be identified. They also have a basis upon which rational decisions can be made to improve the curriculum. This approach has helped them to make a good business education curriculum an even better one.

*The behavioral approach provides a solid basis for improving the instructional process.* Meaningful behavioral objectives provide an instrument for communicating to business students the instructional intent of business educators. These educators have a distinct instructional advantage if they have objectives incorporating the behaviors they want their students to evidence at the end of an instructional period. They can provide more meaningful classroom activities if they have written terminal behaviors to guide them in lesson planning. They can select more meaningful learning activities for each business course.

Business educators can employ behavioral objectives to guide students through the instructional process. By referring to the behavioral objectives, business educators can help students correct learning activities that they may be performing incorrectly. They can also give encouragement to students who are reaching short-term goals in an acceptable manner. In this way, business students are rewarded immediately when they are performing well. Characteristically, business students learn better in such an instructional environment. The behaviorally stated objectives afford business students an opportunity to recognize where their strengths and weaknesses lie during each part of the learning process. The behaviorally stated objectives permit business educators to know exactly how their students should perform by the end of the instructional period. Thus, they have an instructional advantage over the business educators who are unsure of what is happening in the classrooms until after the semester has ended. Furthermore, business educators can plan and write behaviorally stated objectives for daily lessons from course objectives and select appropriate learning strategies. Once business educators have objectives that have been behaviorally defined for each lesson, they discover it is much easier to teach and their instructional procedures improve. They know precisely what to expect from business students, and business students know precisely what is expected of them. Behavioral objectives help to create a comfortable learning atmosphere in the classroom.

In addition, behavioral objectives enable business educators to provide a student-centered approach to the instructional process; i.e., the use of behavioral objectives permits business students to select the instructional content they need for learning new topics on the basis of their present knowledge, values, and skills. Once business students have these objectives clearly in view, they know what they already can or cannot achieve. They can then proceed to read instructional materials, ask questions, perform learning activities, observe situations, talk with resource persons, or utilize the expert knowledge and skills of business educators in order to reach their learning objectives. In this procedure, business students are not forced to repeat what they already know. Use of behaviorally stated objectives allows

them to begin learning at the exact point where they will further advance their individual knowledge of a situation.

Once the business students and educators have selected appropriate behavioral objectives for the students to pursue, learning is placed in the hands of the students. Of course, motivation for achievement on the part of the students requires selecting meaningful behavioral objectives. Real excitement occurs in the business classroom where business students are able to plan and shape their own learning experiences and study materials that are personally relevant. Students are forced to make real choices in the instructional process when behavioral objectives are used in the business classroom, and learning becomes their responsibility.

Various business educators are using behavioral objectives to choose materials, methods, and procedures that seem most appropriate for classroom instruction; they perceive the behavioral objectives approach as a bridge between curriculum and instruction. After they have written behaviorally stated objectives, they are able to make appropriate decisions about effective teaching materials, strategies, and activities in a more easy, systematic fashion.

*The behavioral approach provides a solid basis for improving the evaluative process.* It is possible to evaluate business students more effectively with behaviorally stated objectives because they give business educators a clearer picture of instructional intent, thus providing a sound basis for selecting appropriate testing materials. Business educators are able to select test items that will adequately reflect students' ability to perform desired skills and demonstrate the acquisition of desired knowledge and values. A number of business educators relate that behaviorally stated objectives have encouraged them to develop more explicit testing situations within the business curriculum and that behavioral objectives are an effective approach to evaluation. They believe business students are provided with both short- and long-term objectives in terms they can understand. The students can prepare more easily for testing situations, whether it be written tests, performance measures, or attitude scales. Some business educators have eliminated the use of standardized examinations. They simply evaluate business students according to the number and quality of behavioral objectives achieved during an evaluation period. Business students are reacting favorably to this type of evaluation process for business classes.

Business educators do not always know if they have taught effectively in the business classroom. If they are evaluating the effectiveness of their business teaching with traditionally stated objectives, they may have a difficult time deciding how well they have accomplished their teaching tasks. However, if business educators develop behaviorally stated objectives before teaching, they have more definite standards by which to judge the quality of their teaching efforts. If the behavioral objectives are achieved by business students and there appear to be no negative side effects from the instructional process, business educators can more adequately determine if they have been giving students good classroom instruction. A number of business educators agree that the effectiveness of classroom teaching can be

determined to a greater extent if they have created behaviorally stated objectives and have followed them carefully during the teaching process. The behaviorally stated objectives offer a vehicle by which their teaching results can be evaluated more precisely. Education of business students is big business. Billions of dollars are spent annually on business education. There is a definite need for business educators to more adequately evaluate the effectiveness of their instruction. This is possible through writing and using behaviorally stated objectives.

A final strength of using meaningful behavioral objectives for evaluation in the business classroom is that students now have the needed direction and purpose for their study efforts. They have a clear picture of what they should be able to accomplish when they have successfully completed a learning task. Further, the students can use the behavioral objectives as a vehicle to evaluate their progress at various checkpoints during the instructional period and can then redirect their learning efforts toward more meaningful classroom activities that will enable them to complete a course of study successfully. They can gain the knowledge, attitudes, and skills necessary to achieve the final behavioral objectives specified by the educator. Students will not waste unnecessary time discovering the goals of the business class. Their goals are behaviorally stated to use in planning their learning activities for the final evaluation, and they are informed about the grading criteria. They have direction. They know what is expected. They know how proficiency measurement will be determined.

## CONCLUSION

Research of the behavioral approach to formulating objectives indicates many business educators believe the curricular, instructional, and evaluative processes can be improved as a direct result of the proper use of behavioral objectives. Many weaknesses involved in the development and implementation of behavioral objectives can be resolved. These weaknesses are probably the result of improper construction and/or use of behavioral objectives. Business educators should recognize the potential benefits that accrue to business students when behavioral objectives are utilized as learning guides in the classroom. Creative behavioral objectives can add the dynamic forces of motivation and originality to subjects that business educators teach, if they emphasize the strengths and eliminate the weaknesses associated with the development and implementation of behavioral objectives.

To those business educators genuinely concerned with developing a useful behavioral objectives approach, assistance is available from professional literature, business education courses, seminars, in-service workshops, consultants, and behavioral objectives banks. If business educators sincerely desire to focus more precisely on meaningful subject areas, select more appropriate teaching strategies and materials, and develop more valid evaluation procedures, the behavioral approach to formulating written objectives may enable them to improve their effectiveness in the classroom.

CHAPTER 3

# The Status of Behavioral Objectives in Business Education

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Joint efforts of psychologists, educational psychologists, and curriculum theorists in integrating research findings are responsible for the general acceptance of behavioral objectives as a vital component in instructional planning. Because of its descriptiveness, the author prefers the term *performance objectives* to *behavioral objectives*. For consistency, however, the term *behavioral objectives* is used throughout this chapter. The two terms are synonymous.

To the novice it may appear that Mager's familiar how-to-do-it book (1962) introduced behavioral objectives, but this is not true. Mager's work simply provided steps for their construction. Also, it unleashed a flood of rhetoric concerning the merits of precisely stated instructional objectives. Mager built upon the works of Search (1901), Thorndike (1911), and other early proponents of clearly stated objectives, as well as on Tyler (1950), who initiated the basic concept of stating goals of education in behavioral terms.

While generally accepted, Mager's work stimulated the critics to focus on two major omissions. First, Mager provided no direction as to the sources of objectives. Beautifully stated objectives were of little value without some means of validation. Second, Mager provided no suggestions for separating exit (terminal) objectives from enabling (en route) objectives, and no suggestions for sequencing objectives.

Today the means are available by which to validate the competencies (tasks plus minimum standard of performance) from which behavioral objectives in business education are constructed, to validate the objectives, to formulate exit objectives and analyze them for subcompetencies (thereby creating enabling objectives), and to sequence objectives. This chapter summarizes the status of behavioral objectives in general and within business education in particular, synthesizes existing research on behavioral objectives, and suggests future applications and research.

## STATUS OF BEHAVIORAL OBJECTIVES

Despite the controversy over behavioral objectives that reverberated through the 1960's, behavioral objectives today are generally accepted as a means of defining the objectives of instruction and learning in terms of

observable performances. All critics of behavioral objectives have not been silenced. Many are still articulate, cautioning against the dehumanism that may accompany such objectives. Proponents of such objectives march valiantly forward with arguments to justify their zeal. Today behavioral objectives are a way of life for most classroom teachers and for their students.

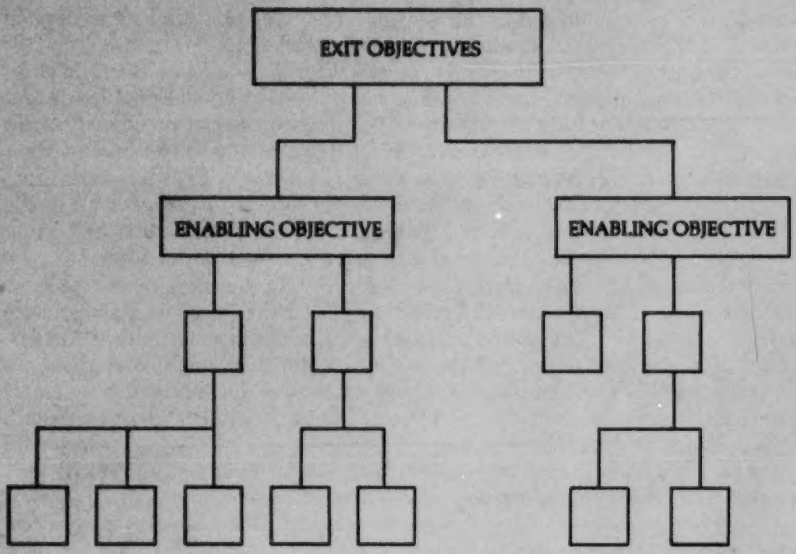
Theorists and researchers now classify behavioral objectives among preinstructional strategies, including pretests, behavioral objectives, and overviews. Hartley and Davies' analysis of research reveals behavioral objectives and pretests are frequently combined as one preinstructional strategy.

*General status.* A whole technology of writing behavioral objectives has emerged, including programmed materials, books, slide-tape presentations, and tutorial materials employed in in-service teacher workshops. Analysis of multiple books as well as two teacher-prepared manuals on how to write behavioral objectives reveals that most resources employ simple steps to serve as guides in writing an objective in behavioral terms.

While components of the guide books differ, there are more similarities than differences among them. The chief difference between the earlier books, Mager (1962), Popham and Baker (1970), Walbesser (1970), and the later books, Popham and others (1975) and Pierce and Lorber (1977), is the analysis and application of literature relating to (1) competencies as the source of behavioral objectives, (2) the focus on exit objectives as hoped-for outcomes of a course rather than upon the writing of miniscule enabling objectives, and (3) the classification of competencies and/or objectives in terms of the dominant domain (cognitive, affective, or psychomotor) as well as by levels within each domain.

Thus, the latter part of the 1970 decade reveals a refined basis for the creation of behavioral objectives. Much of the progress can be attributed to developmental work such as that of Melching and Borcher (1973) in setting forth the procedures for constructing task inventories (a list of tasks performed by workers in an occupational area) and the application of those procedures by Borcher and Joyner (1973) in studying the occupational areas of the secretarial sciences and data processing. Another improvement, the separation of the exit objectives from the enabling objectives, can be illustrated graphically. (See illustration on page 29.)

Analysis of this illustration suggests 13 subgoals or enabling objectives to be learned before the student is likely to be successful on the exit objective. Current practices involve the analysis of the exit objective by in-service teachers who determine the enabling objectives needed to assure successful performance on the exit goal. Such a sequence as illustrated has limitations, for there is no assurance that the sequence is valid. Perhaps a critical enabling objective has been omitted or one may be out of order. How well each learner succeeds in acquiring each of the enabling objectives provides the validation of sequence. Many teacher-planned sequences must be altered as they are tested on learners. In fact, research reveals that teacher sequencing is not necessarily effective for all learners.




In an analysis of the research on sequencing of instruction, Walbesser and Eisenberg (1972) reported that the meaningfulness of instructional material may be increased by allowing the learner to indicate what gaps exist at the time they appear. This observation suggests that once the subcompetencies of a behavioral objective have been identified, the learner and teacher together might determine which of the subcompetencies is appropriate for individual students. At that point each student may chart his/her own sequence under the teacher's guidance. No teacher-prepared sequence should be used without giving each learner the opportunity to determine which sequence is appropriate for him or her.

Classification systems developed by Bloom and others (1956), Gagne (1965), Krathwohl and others (1964), Simpson (1970), and Tuchman (1972) are now available as guides in classifying each competency or objective as to domain and level. Classification within the cognitive domain (Bloom) reveals those objectives that require the higher level intellectual processes of analysis, synthesis, and evaluation (decision making). When one considers that the critics of behavioral objectives frequently cite preoccupation of the writers of objectives with lower level cognitive goals (knowledge and comprehension), the classification provides a positive step in planning for higher level objectives for learners, as well as for objectives within the affective domain.

Analysis of objectives for level of learning is relatively new and only one study is reported in this area. Not until 1975 did McKeen and Walbesser employ Gagne's hierarchy of learning to analyze 100 randomly selected objectives from a mathematics curriculum for kindergarten through sixth

grade. They concluded that the sample objectives analyzed rated low in terms of intellectual demands put upon the students.

Recently, the growing body of behavioral objectives is sufficiently strong that not only are such objectives employed at educational levels and for virtually every type of subject and course, but banks of objectives are available from which teachers may select those pertinent to needs of their students. Examples of such banks are the UCLA bank, PRIMES, the Westinghouse Learning Corporation, the Regional Education Laboratory of the Carolinas and Virginia, the Instructional Objectives Exchange, and more recently the Vocational-Technical Education Consortium of States.

*Status in business education.* While only practitioners are able to provide actual insight into the current use of behavioral objectives, state departments of education and local school districts frequently exert leadership in effecting changes. For this reason, a decision was made to survey these agencies in an effort to gain an overview of the status of behavioral objectives. A major limitation is inherent in this approach, for even though supervisors of business education provide opportunities for classroom teachers to update themselves on current practices, teachers adopt practices differently. A logical second step, the survey of classroom teachers to determine their involvement in implementing behavioral objectives was not done preliminary to developing this chapter.

With this constraint in mind, each state director or supervisor of business education and supervisors from five large local districts were sent letters, two-page questionnaires, and a stamped, addressed return envelope. Of the 55 directors and supervisors canvassed, 29 (or 52 percent) responded. Respondents represented 24 states and Puerto Rico—Alabama, Alaska, Arizona, California, Colorado, Connecticut, Florida, Indiana, Illinois, Idaho, Kentucky, Maryland, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Virginia, Wisconsin, and Wyoming. All data presented within this section reflects only data gathered from these states and Puerto Rico.

The responses were classified by state to reveal the following evidence:

| *Number of Respondents* | *Evidence* |
|---|---|
| 5 | Leadership from state and/or local district exerted in developing objectives |
| 5 | Currently planning and/or conducting work in developing behavioral objectives |
| 3 | Affiliating with a consortium |
| 11 | No action taken by state. |

Thirteen of the 24 states have made progress or are focusing their efforts on updating teachers in preparing and using behavioral objectives. Three questions were posed, each requiring open-ended responses. Summaries of these responses are analyzed below.

*Question 1: What leadership does your state or local district offer to provide teachers with those competencies needed by graduates of your business programs?*

While a logical approach to the determination of competencies on which to base performance objectives is a well-conducted task analysis that may be revalidated in various geographic areas, such is not the current practice. Responses suggest not only duplication of efforts but little sharing of ideas and/or research findings. Only three states—California, Iowa, and Oregon—reported competencies used were derived from actual research.

Oregon's leadership in office task studies is legend (Perkins, 1968). Since that time Oregon business teachers have been provided with research-based tasks classified by occupational clusters, and each of the global tasks is broken into subtasks. Oregon's philosophy is to provide the tasks and encourage the local district teachers in conference with their advisory committee members to agree upon minimum standards of performance, thereby creating competencies.

California, too, employs a research-based approach derived from the study of 68 companies identified as the sample for the selected office and distributive occupations agreed upon. Independent interviewers worked with employees in these 68 companies to develop and validate the various competencies that serve as the basis for program development.

Six other states at least recognize the need of interaction with the business community. These states reported one or more of the following: regional conferences at which business teachers and members of the business communities interacted, advisory committees, and structured follow-up of graduates each year. There is a glowing ray of hope for the future sharing of research efforts, for three states reported affiliation with a national consortium involved in the creation of task inventories and the systematic construction of behavioral objectives based upon these inventories. Elaboration of the consortium's efforts is presented in the last section of this chapter.

*Question 2: Does your state (or district) have a battery of behavioral objectives from which teachers may select those pertinent to a subject or course?*

California, Iowa, Michigan, New York, and Oregon reported the greatest progress. (Several respondents made a special plea that people *not request materials* directly from state offices. Your state's supervisor or director of business education probably has copies of materials from the states mentioned and may be willing to share them with you.)

Undoubtedly, the most sophisticated systems are those of California, Michigan, and the school district of Oakland County, Michigan. California has cataloged competencies into common areas such as job application, making change, etc., and provides its teachers with exit behavioral objectives for the various competencies. Moreover, a sophisticated retrieval system is available to teachers whereby they may utilize the Business Education Data Dissemination System to access learning activity packages through a numerical classification of the competencies. Such packages, while not yet available for every competency, contain exit and enabling objectives, learning activities, and evaluations (tests).

Another pioneer, Michigan, planned a broad attack on vocational education and began generating behavioral objectives for all vocational-

technical programs as early as 1972. While the actual project embraced multiple phases, the outcomes were batteries of behavioral objectives created by groups of teachers, whose output was evaluated by representatives of business and industry, as well as other teachers. Revisions were made before the objectives were disseminated to classroom teachers. Teachers and administrators within each district review the minimum behavioral objectives available and either adopt them or revise the state's objectives and/or create their own and submit them to the state department of education for approval. While the Michigan project concluded in September 1974, teachers in the districts are still expanding the original lists of behavioral objectives and creating enabling objectives. Through teacher efforts the former project is an ongoing part of many programs.

One local district, Oakland County, Michigan, decided to initiate its own objectives for the vocational programs for its four career centers (area vocational-technical schools). Behavioral objectives were developed from competencies and an extensive computerized information system now functions. Teachers refer to the list of competencies for the code, input that code on the terminal in each school, and retrieve from the system the behavioral objectives. The system is now being expanded to include lists of suggested learning activities for many of the objectives, all created by teachers within the system. Business teachers in schools other than the career centers have direct access to those objectives relating to their programs.

*Question 3: Does your state offer leadership in the development of criterion-referenced tests to measure attainment of the various objectives?*

Since the literature substantiates that behavioral objectives form only one component of an instructional system, a natural check on the effectiveness of the objectives is criterion-referenced tests (CRT). Such tests are designed to measure the student's attainment of the specific objectives. The end evaluation is the attainment of the objectives by the student and the effectiveness of the teaching-learning processes as measured by CRT.

Once more, California exerted leadership and has made progress with more than 800 pages of pretests and posttests (posttests are generally CRT). Michigan relies on its teachers to expand the objectives and to create CRT. Oakland County, Michigan, has selected CRT in its system and is in the process of expanding its criterion-referenced tests for each of the exit goals, although the process is time consuming. Eventually, the plan is to have CRT within the computerized retrieval system available for its teachers. North Carolina is in the process of testing CRT for two courses. Perhaps because of its long history with New York Regents Examinations, New York is pioneering the developing and field-testing of CRT. Presently they have developed and tested CRT for typewriting, shorthand, and accounting/bookkeeping. Other tests are being constructed.

While the progress in CRT is slim, the firm beginning evident in several of the states points the way for considerable future development. Generally, it appears that broad testing of criterion-referenced tests and the creation of multiple forms of the tests are all left for future effort.

## RESEARCH ON BEHAVIORAL OBJECTIVES

Momentum is carrying behavioral objectives into the mainstream of education. Within the 1974, 1975, and 1976 volumes of the *Current Journals of Education Index*, articles on behavioral objectives appeared for virtually every subject taught at the elementary, secondary, college, and university levels. Despite the fact that the behavioral objective movement has passed its fifteenth birthday, only about 60 studies have addressed the question, "Do the claims of proponents of behavioral objectives hold up when subjected to the rigors of research?"

As might be anticipated, findings in these studies are inconclusive. When it is considered that even the behavioral objectives studied were not precisely formulated, one would expect varying findings to emerge. When the behavioral objective variable is added to others such as the teacher's experience in using behavioral objectives, the content taught, the type of learning (cognitive, affective, or psychmotor) involved, and multitudinous evaluation procedures—sample size, length of time of studies, personalities, attitudes, learning styles, learning abilities, and achievement levels of subjects—consensus among findings is almost impossible. Unfortunately, no studies involving behavioral objectives (BO) in business education were found among the research. Several syntheses of research on behavioral objectives are available. While it is recognized that findings of studies in business education may or may not be similar to those in other subject matter areas, it is helpful to examine the findings relating to key questions as well as generalizations emerging from syntheses by Walbesser and Eisenberg (1972), Duchastel and Merrill (1973), Duchastel and Brown (1974), McKeen and Walbesser (1975), Tennyson and Tennyson (1975), and Harley and Davies (1976). These reviewers reported that the studies examined used similar research designs and possess the attendant range of flaws generally found in research design.

*Do BO produce higher scores on posttests than generally stated objectives?* While the evidence is rather conclusive that the use of behavioral objectives does not produce higher posttest scores, learners who have access to such objectives tend to achieve more objectives than learners who are not aware of their hoped-for outcomes. (McNeil, 1967; Engel, 1968; Doty, 1968; Schuck, 1969; Dalis, 1970; Olsen, 1971). Engel worked with education majors who were divided into two groups—one using behavioral objectives and the other not using them. Students who had access to the objectives attained more objectives than the others. McNeil employed student teachers who were randomly divided into two groups, each of which taught students with similar characteristics. Group 1 student teachers were told that their grades for student teaching depended upon achieving acceptable results for specific behavioral objectives they were to give their students. Group 2 student teachers were informed that their grades would be determined by the presentation of acceptable lesson plans and the use of appropriate teaching methods. Students taught by Group 1 student teachers achieved more objectives than students taught by those in Group 2.

*Do students who are given BO prior to instruction have more positive attitudes toward learning than those who have no access to the objectives?* Little research has been done in this area, but there is nothing to suggest that students given behavioral objectives react negatively. Two studies suggest that the use of such objectives contribute toward positive attitudes. (Tiemann, 1968; Rowan, 1971).

*Do BO assist students in organizing their efforts for learning?* There is some evidence that such objectives assist students in organizing. Merrill (1974) concluded that behavioral objectives assist students in organizing, thereby facilitating performance on criterion-referenced test items. Sink (1973) found that disclosing objectives to students before traditional teaching is more advantageous than disclosing them before such nontraditional teaching as programmed instruction. Perhaps the carefully structured steps with programmed materials make objectives superfluous, whereas objectives serve to direct students in less structured learning situations. DeRose (1970) reported two studies in which students were supplied with behavioral objectives to guide them during independent study. These students performed as well on the examination as those who were taught conventionally yet had no access to the objectives.

*Do BO have any effect upon the learning time?* Mager and McCann (1961) reported on three groups, with one group's learning sequence controlled by the instructor. In the second group, the students were permitted to select the content according to their own priorities, and the third group was presented with detailed statements of training objectives that included the kinds of questions on which posttesting would occur. Subjects in Group 3 were simply told to present themselves for testing when they were ready to demonstrate the behaviors stated in the objectives. When tested, the third group was equally proficient as those in Groups 1 and 2, yet the training time consumed by Group 3 was up to 65 percent less than that of the other groups.

Job training conducted by Smith (1964) offers a parallel for business education and substantiates the findings reported by Mager and McCann. An existing course designed to prepare trainees for a particular job consumed 1,000 hours of class time. Smith analyzed the job and determined the tasks performed and from those tasks constructed behavioral objectives. These objectives formed the basis for a 400-hour course given to trainees. Trainees using the objectives were as proficient within the 400 hours as those emerging from the 1,000-hour course, yet learning time was reduced by 60 percent.

*Do BO assist students in retaining what has been learned?* Retention of learning has been the subject for investigation since the 1920's, and it is generally agreed that the strength of learning and the related resistance to forgetting vary directly with the opportunities for applying the learning. Several investigators hypothesized that the use of behavioral objectives has a direct positive effect on the retention of learning. Walbesser (1970) examined the rate of acquisition and the retention by testing the hypothesis that telling subjects the behavioral objectives at the beginning of instructional

activity increased the rate of acquisition and the resistance to forgetting. Students were randomly assigned to two treatments and instructional materials employed for both groups were the same. A measure of retention was administered several weeks after the posttest was taken. Walbesser concluded that the knowledge of objectives increases the learner's rate of acquisition and provides resistance to forgetting.

Cook (1969) explored retention of learning by providing behavioral objectives to one group of students and none to the second group. Results of this study supported the hypothesis that students provided with behavioral objectives are less resistant to forgetting than are those not supplied with the specific objectives. Smith studied college students in an effort to determine the effect of behavioral objectives on rate of learning and retention. His subjects were given the posttest six weeks after the unit had been completed. Results supported the contention that those who learned faster also retained more.

Several studies utilized delayed testing as a means of evaluating the effectiveness of behavioral objectives in retention of learning for two- and four-week periods. Generally, behavioral objectives appear to influence retention more over the four-week period than over the shorter period.

*Should teachers be trained in the use of behavioral objectives?* The consensus of research by McNeil (1967), Piatt (1969), and Bryant (1970) is that student achievement is affected positively by teachers who are trained in the use of behavioral objectives. Although two studies involved training students in the use of the objectives, no positive evidence resulted.

*Areas of inconclusive findings.* In addition to those questions posed above, researchers studied learner characteristics and their relationship to behavioral objectives. As might be anticipated, because of the quality of objectives employed and the research variables, little concrete evidence is available to guide teachers in determining which students profit most from behavioral objectives. Whether the students come from high or low socio-economic groups, are self-controlled and independent, or are of low, middle, or high ability seems to make little difference. Results of the research are highly contradictory. Undoubtedly, the subject matter context, the teacher, the quality of the objectives, as well as the learning experiences and the criterion tests are variables that have interacting effects.

Another controversial area is the appropriateness of behavioral objectives for the various levels of learning. For example, Duchastel and Merrill summarized studies and generalized that behavioral objectives appear to produce more positive effects when applied to higher cognitive learning. Conversely, Dalis found the effects to be more positive when applied to lower levels of cognition. Walbesser and Carter's (1970) evidence supports the value of behavioral objectives for lower level learning.

*Generalizations from the syntheses.* Few conclusions were drawn by those who interpreted research findings. Several generalizations, which are listed below, appeared in more than one synthesis and may inspire research within business education.

1. Behavioral objectives are appropriate for any educational level from grade school through university.

2. There is evidence that the use of behavioral objectives as one component of preinstructional strategy may have positive effects for some students, although the precise characteristics of those students are indeterminate.

3. No evidence supports the value of behavioral objectives for either higher cognitive levels of learning or the lower. Of course, individual differences among students may be one of the dynamic variables.

4. It appears that behavioral objectives are used more effectively when teachers are prepared in their use. This provides an excellent argument for expanding the preparation of in-service teachers beyond simple construction of behavioral objectives.

5. While the use of behavioral objectives produces no higher scores on posttests, evidence is accumulating that students supplied with the objectives attain more objectives than those who have no access to objectives.

6. Increasing evidence suggests that behavioral objectives may be a factor in shortening the learning time. Perhaps the behavioral objectives assist students in organizing their time and effort, or perhaps teachers plan learning activities that are more directly related to the objectives.

7. It appears that the access to behavioral objectives may produce more positive attitudes toward learning. In no instance was a negative attitude produced.

8. Substantial evidence exists to suggest that the organizing effect of behavioral objectives is valuable for some students.

9. Whether or not behavioral objectives strengthen retention of learning remains unclear, although some evidence suggests that there may be a direct relationship.

## FUTURE APPLICATIONS AND RESEARCH

Concerted efforts of business educators to accumulate research-based competencies as sources for behavioral objectives has been slow. Perhaps the activities generated by states such as California and Michigan and by local school districts such as Oakland County, Michigan, have stimulated state directors to recognize that joint effort is the only viable alternative. The vehicle for joint efforts is available—the Vocational-Technical Education Consortium of States (V'TECS, 795 Peachtree Street, N.E., Atlanta, Georgia 30308). While the primary objective of V'TECS is to improve education in the South through exercise of leadership and the promotion of cooperative efforts among colleges, schools, and related agencies, states far removed from the South are now joining the consortium. As of December 1976, V'TECS boasted 15 states, extending from Louisiana to the Southwest and Florida in the South all the way to Michigan, Pennsylvania, Delaware, and Maryland.

V'TECS has amassed a growing list of catalogs of performance objectives that are based upon researched tasks and include every sector of vocational education. Within business education the catalog includes bookkeeper I, bookkeeper II, data processing, bank teller, legal secretary, executive secretary, word processing, and secretarial.

Once a state has committed itself to V'TECS, technical coordinators from V'TECS train the team within each state that is responsible for working with the consortium. Training is provided in designing systems for surveying workers in an occupational group, analyzing the tasks performed and the minimum standards required on the job, developing catalog of tasks and standards, developing a catalog of performance objectives, field-testing the objectives for validation, and developing and testing criterion-referenced tests by which to measure students' achievement of the objectives. Evaluations are built into each phase of the development. Whether V'TECS is a panacea for the lack of action by many states in providing a quality system remains for future research.

While formative research has been a part of the developments within such states as California and Michigan, virtually no experimental research involving behavioral objectives has been conducted within business education. Educators need to know whether occupational programs based upon researched tasks produce workers who function more effectively on the job than those prepared through traditional programs. What are the effects in the use of behavioral objectives constructed from these research-based tasks on business students? What are the effects of criterion-referenced tests on students once they enter the work force? Do students transfer learning to the job more easily when prepared through an instructional system involving task analyses, objectives, and CRT? These and a host of other unanswered questions provide fertile experimental research for scholars in the years ahead.

Perhaps the most pertinent aspect is that behavioral objectives provide only one dimension in the preparation of students for employment and for functioning effectively in a dynamic economy. Rather than concentrating research on behavioral objectives, researchers may find their efforts more productive when they are directed toward an evaluation of the effects of all components within a teaching-learning system—task inventories, objectives, pretests, sequencing of enabling objectives, criterion-referenced tests, and the multiplicities involved in teaching-learning strategies. Perhaps V'TECS provides the challenge that business education needs to structure a long-range research plan and to begin chipping away at studies that will build a solid foundation on which to effect programmatic changes that will improve the product—the student completing a business education program.

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# Part II

## ACCOUNTABILITY IN BUSINESS EDUCATION

### CHAPTER 4

## The Theory of Accountability in Education

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Many educators once felt that the decade of the 1970's would be remembered as the time when the theory of accountability truly took root and began to grow. Over half of the "decade of accountability" has now come and gone, yet it appears that we are sprouting many accountability branches without having formed a sturdy trunk.

A universally accepted theory of accountability in education does not yet exist. Standardization of thought on this oft-controversial topic would certainly be a boon to those who wish to discuss and implement the theory of accountability. However, there is an old saying which still holds true: When everyone thinks alike, no one thinks very much. A diversity of opinion about the concept of accountability is not all bad. Conflicting opinion is often the impetus for the development of new and marvelously exciting ideas and methods. Sometimes the creation of controversy where none previously existed causes enough inspection and introspection to be well worthwhile. The methods of applying the accountability concept may always generate disagreement among educators, but it is important for the purposes of discussion that we establish an agreeable definition of the term.

What is accountability? The Living Webster Encyclopedic Dictionary of the English Language defines accountability as "The state of being accountable, answerable, liable, or responsible." The same dictionary goes on to define accountable as "Liable to pay or make good in case of loss; responsible for a trust; liable to be called to account; explicable."

Of course, a dictionary cannot do justice to the application of a concept to a specific field. Thus, the definition given does not tell us how to apply the concept of accountability; in fact, it doesn't even guarantee that this definition is applicable to education in general, and business education in particular. A more thorough investigation of the term may more readily allow the concept of accountability to be put into practical use. In light of that fact, several other definitions of accountability have been offered. Nearly everyone who has thought of the concept has developed his own definition. Perhaps the meaning of the term has been best stated by Porter:

> Accountability is the guarantee that all students, without respect to race, income,

or social class, will acquire the minimum school skills necessary to take full advantage of the choices that accrue upon successful completion of public schooling, or we in education will describe the reasons why.[1]

Those of us in education should feel that we are indeed responsible for a trust; the future of each student who enters our classroom will be affected by us in some way. This result of teaching is a tremendous trust that is being placed on the shoulders of our profession. But does the placement of this trust actually indicate that teachers should be held accountable, or is it simply saying that someone must be held accountable for the results of education? It would certainly seem that eventually someone is going to be forced to "make good in case of loss." If we can agree that accountability should, and inevitably will, exist in education, perhaps the next step is to determine who is to be held accountable.

## APPLYING THE THEORY

The question of who is accountable in education at first glance appears to be academic. The first response to enter one's mind is "The teacher, of course!" However, further analysis may cause a readjustment of our first instincts.

Some sources have indicated that schools should certify each student's ability to perform specific tasks, rather than the present approach of certifying the amount of time spent in school or the number of courses through which the student was able to sit. Competency-based teacher education has been put forth as one means by which teacher education programs can demonstrate accountability. Harris and Finch indicated that "CBTE offers the immediate promise of increased prospects for accountability. In competency-based teacher education the student is held accountable for performance."[2]

The idea that students should be held accountable for their own performance runs contrary to what most of us have been taught. The traditional indoctrination of future teachers in a teacher education curriculum would never allow such a thought to briefly journey through one's mind; heaven forbid that a prospective teacher might actually believe such a theory! A simple observance of our title (teacher) has indicated to many people the presence of a demagogue with principles. Most of us were raised on the belief that "if the student hasn't learned, the teacher hasn't taught." That is the beginning stage of the concept of teacher accountability. Are we now being told this concept isn't valid?

Student accountability does not eliminate the teacher's responsibility to teach. There is no adjustment in the responsibility of the teacher under the concept of student accountability. The concept simply means that the student must not only obtain knowledge but also must be able to apply that knowledge. The actual application of knowledge, the performance, is

[1]Porter, John W. "Accountability in Education." *Accountability in Education.* (Edited by Leon M. Lessinger and Ralph W. Tyler.) Worthington, Ohio: Charles A. Jones Publishing Co., 1971. p. 42.

[2]Harris, Ruth D., and Finch, Curtis R. "The Challenge of Competency-Based Teacher Education." *Implementing Competency-Based Teacher Education: Future Directions for Vocational Teacher Educators.* Blacksburg: Virginia Polytechnic Institute and State University, June 1976. p. 10.

up to each student. Thus, the statement that "the student is held accountable for performance" does not mean that each student is responsible for his own education, but rather it indicates that the individual is responsible for putting his education into practical use.

The most likely person to be praised for excellence of academic performance is the student; when academic performance is perceived as substandard, the teacher receives the brunt of the criticism. This kind of evaluation indicates that not only do circumstances exist in which students are considered accountable for their own performance but teachers are also considered to be accountable by some sources.

However, for what aspect of performance are teachers to be considered accountable—their own performance or the performance of their students? Traditionally, any evaluation of teachers has been on the basis of how they taught rather than what was learned. Accountability for performance carries with it the connotation of performance evaluation; the evaluation of teacher performance implies an understanding of the characteristics of an effective teacher. The easiest measurement is the measurement of how teaching takes place (i.e., rating sheets for knowledge of subject matter, use of audiovisual aids, teacher preparedness, sense of humor, etc., generally evaluated by students). The emphasis is placed on how do you teach! That type of evaluation could validly be used as a factor in determining the accountability of teacher education institutions. The concept of accountability should find us being concerned about the product rather than the process. Thus, we should be concerned about the performance demonstrated by our students.

Education seems to be based on the premise that competitiveness is next to godliness. Certainly competition is an integral part of our economic system, but is competing from the very start of an individual's educational experience the best way to prepare that individual for business competition? Is not a solid knowledge base a necessary prerequisite for success? Should one build a house without a foundation?

We cannot apply what we do not know. Competing in school before the knowledge base is attained leads to failure, and those individuals who seldom feel the exhilaration created by success will eventually withdraw from our educational system and thus stand little chance of ever being successful. Yet competition is perpetuated in our school systems beginning in the first grade.

That students must be classified by letter grades and ranked from top to bottom seems to be a nearly universal belief. This kind of grading may be a motivator for those students near the top, but it has a tremendous negative impact on those near the bottom. It creates a self-image which may be carried forward forever and prevent each individual from realizing his full potential.

The incident about to be related is a true story. As in the famous television series, only the names have been changed to protect the innocent. A high school classmate, Billy Jones, had become a classmate because he had "failed" one grade in junior high school, thus spending two years learning all of the same material. (It would seem that he must have learned something

during the first year which need not have been repeated!) This failure made it immediately known to everyone—students, teachers, and administrators, as well as the people of the community—that Billy Jones was "stupid." Billy had no difficulty living up to the negative image which had been created. He did just enough work to prevent failure in any of his classes until his senior year. Then he met a friend who hadn't heard that Billy was stupid. The friend believed in Billy, and Billy wanted to prove that his friend's trust was justified. His grades improved tremendously, he enrolled in college, and has since earned a college degree.

The example is a true incident. Isn't it too bad that the teachers all perpetuated a negative image and that it took a high school student to bring out the best in a fellow student? This may be an example of an individual's learning in spite of the teacher rather than because of the teacher.

Does it really matter how our objectives are achieved, as long as our students are capable of performing near capacity? The idea of students' performing at or near capacity brings forth another problem. What can be done about the apparently rapid obsolescence of the knowledge and skills obtained in an educational setting?

It appears that many students who are dubbed worthy of receiving a degree or diploma and thus entering "the world of work" are adequately prepared for the present but woefully unprepared for the future. Even college graduates can and do suffer some degree of future shock. Should a teacher be held accountable forever for each individual student's performance? We must agree that such an expectation would place an inordinate burden on a teacher well beyond the point when teaching adjustments can affect the performance of students who have graduated. Some point after the completion of formal education must be established when a teacher is no longer considered accountable for a former student's performance.

Since a major factor in the success of a program of accountability is the measurement of student performance, we must determine what aspects of performance are to be measured. Are we accountable for all performance or do we have limited liability? Can the insurance for an individual's education have a deductible amount? We must eventually agree on the types and amount of achievement or performance to be measured.

Should we be fortunate enough to validly determine what should be measured, we must then be able to develop a reliable measurement instrument. Can we continue the testing procedure now in use? Can teacher-developed tests be used to determine teacher accountability? Must all measurement occur in the same manner, so that the performance of each individual throughout the country can be compared with the performance of any other individual? Or are some factors involved in performance uncontrollable? Should teachers not be held accountable for such factors? Certainly many factors are not easily measured, but the quest for new methods of measurement should always continue. Only as we continue to reach beyond our grasp will we make significant progress.

A question of feasibility appears pertinent at this point. Is it possible to hold the teacher solely accountable for a student's success or failure? If a

student develops a skill on antiquated equipment and has difficulty adapting the skill to modern equipment, is the teacher to blame? Can a student receive a failing grade, or has the teacher failed? Opinions will vary greatly, and each opinion is likely to have substantial verifying evidence. However, most of us would agree that teachers should motivate students and assist them in the learning process. Some teachers perform this task more effectively than others, but can even the best teacher motivate every student in every class he teaches? Is it humanly possible to oversee the education of each student at all times?

Certainly there are financial considerations. A student-to-teacher ratio of one-to-one may be desirable, but hardly realistic. Yet, without some drastic change in the conditions under which teachers must function it is impractical, if not impossible, to hold teachers accountable for student performance. That teachers have more control over those factors that make accountability practical is imperative. Can we realistically revert back to the days of the teacher with the paddle board and no outside interference in his teaching "methods"? Whether or not that method was practical and efficient, it supplied a measure of autonomy needed to validly hold the teacher accountable for performance, both his own and his students'.

Realizing the impracticality of moving back to the hickory-stick methodology does not mean that we cannot learn from the past. A higher percentage of students who completed their formal education in bygone days were capable of performing adequately both grammatical skills and mathematical skills. This condition was partly the result of the tremendous emphasis placed on grammar and mathematics; but it was also partially due to the desire of students to achieve. Such students were motivated! Motivated persons have a greater probability of success. If teachers are to be evaluated on the basis of student success, they must learn how to motivate students.

Much has been written about motivation. Suffice it to say for this discussion that, although variety is the spice of life, change for the sake of creating variety will not be an effective motivator. All activities must be selected for meaningfulness in terms of student needs and desires. Care in the selection of learning activities will eventually result in better student performance, apparently one of the major functions for which teachers are held accountable.

Time constraints also present a hindrance to the implementation of the accountability concept. The difference in time needed by each student to master a skill would mean that some students would remain consistently behind their friends. This may compound the problem of students quitting school before attaining the skills needed for successful employment. Thus the requirement of demonstrated competence may actually hinder a student's chance for success upon the termination of his formal education.

Financial considerations and time constraints may also be opposing forces. Many smaller school systems operate only nine months each year. If mastery is demanded, students may be allowed to continue working until the specified performance standard is achieved or fail and be forced to begin again next year.

Allowing students to continue working on a skill until a specified level has been demonstrated means that schools would need to operate on a 12-month basis. The physical plant would need to be in operation all year. Teachers would need to be on duty all year. The financial ramifications could be staggering to a small school district.

Failing a student and forcing him to start anew on something he had already partially learned is self-defeating. There is no motivational factor present. What happened to the concept of reward rather than punishment? We have a concept from the bygone era which has been perpetuated without any substantial backing from the psychology of education. The net result of failure is an increased drop-out problem and increased unemployment. Holding teachers accountable will mean that teachers, too, will be considered to have failed.

Still other ideas have been put forth as to who should be accountable in our educational system. Mortimer has noted that "accountability assumes and shifts responsibility—it assumes responsibility for the success or failure of individual schools and pupils and shifts primary learning responsibility away from the student to the school."[3] This notion of placing the learning responsibility on the school rather than the student or the teacher adds another dimension. Not only do we now have accountability of teachers but we also have accountability of administrators.

Perhaps administrator accountability cannot be as readily measured as teacher accountability in terms of student performance, but administrator accountability is often measured in dollar values. The question becomes, "What are we getting out of the system in comparison to the money invested in the system?" Thus, we are really talking about the results achieved in comparison with the resources that have been invested.

Administrators must be concerned with operating the school at peak efficiency while keeping financial expenditures within the budgetary constraints. Pressure is placed on an administrator from all sides to accept "help" in making the decisions regarding the use of available funds. Educational needs and priorities must be determined as an important part of preparing a comprehensive fiscal plan. Perhaps a technique brought to the public's attention by President Jimmy Carter could be adapted for use in an educational setting: zero-based budgeting.

In essence, zero-based budgeting requires that each expenditure be justified in every budget, rather than being justified once and automatically renewed on a perpetual basis. Such a procedure would require a knowledgeable review of monetary requests and would be an important step in the measurement procedure of administrator accountability. Investment and return could be more easily controlled.

The underlying concept of zero-based budgeting could possibly also be used in determining teacher accountability. Under such a procedure, teachers should justify their expenditures of effort and perform those tasks that can be shown to improve student performance. Of course, it would then become

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[3]Mortimer, Kenneth P. *Accountability in Higher Education.* Washington, D.C.: American Association for Higher Education, February 1972. p. 7.

even more important to compare each student's performance at any given time with his initial capabilities and with his capabilities at any preceding time. This measurement will aid in the determination of critical factors in an individual's educational development and give teachers a guide in activity selection. The long-range objective should be the improvement of student performance and thus a successful accountability evaluation for the teacher.

Many businessmen have maintained that a critical factor in job success is the worker's attitude toward his job and his fellow workers. Who is to be accountable for the development of proper work attitudes—teachers, students, administrators, employers, the student's family, all of the above, or none of the above? The alternatives are numerous.

Attitude is certainly a most important factor relating to job success, yet the determination of how to measure it is most difficult. And indeed, do we really know how to teach attitudes? Perhaps if we did, they would be more easily measured and more easily taught. It is a dilemma that will require the ingenuity of all teachers and all others who are concerned. An effective solution would certainly help clear up the muddy waters of accountability.

Community members who pay the taxes supporting our school systems are often very critical of the results they are able to observe. The criticism is often heard that the cost of education continues to increase, but the quality of education continues to decline. Those who subscribe to this theory are quite vocal in placing the blame, regardless of whom they choose to blame. They feel that someone should be accountable for using their tax dollars to improve education. The public has every right to be concerned. But the public alone should not determine the course of education, just as teachers alone and administrators alone should not be entrusted with such a critical decision.

Most of us know of situations where an irate parent has verbally demolished a teacher. If you felt that your child were being taught by an unconcerned and ineffective teacher, would you not be likely to become an irate parent? Yet many questions continually haunt our profession. Why does the effective use of grammar appear to be diminishing? Why can't Johnny read? Why is the mastery of mathematical skills on the decline? With the vast technological advancements that have come about in the recent past, why have we seen no significant improvement in the quality of education? Why are our fastest typists today not able to type significantly faster than their mothers or fathers, particularly with the improvements that have been made in the physical capabilities of modern typewriters? Will increased emphasis on accountability improve these conditions or are they truly beyond our control? Are teachers concerned enough to bring out improvements that would lessen the concerns of parents?

Another problem pervading our educational system is the use of drugs. Drug usage will without question diminish an individual's ability to perform most tasks. Must the members of the education profession then be held accountable for the performance of a student who is drug-influenced? Shall we be held accountable for discovering cases of drug abuse? Shall education be accountable for all that occurs in society? Are we accountable for developing creativity? Are we accountable for the development of good health

habits? Should we teach patriotism? These questions are being raised and deserve to be answered.

As the theory of accountability reaches the point of application, everyone must help determine those things for which they will be held accountable. Without such input, some individuals may find themselves being held accountable for things over which they have no control.

In the process of improving education, it would appear that not one single group should be held accountable, but rather all who are concerned with the educational system must become involved and be at least partially accountable. This would include students, teachers, administrators, school board members, parents, prospective employers, and an indefinite number of others who wish to have some input into the functioning of education.

Since we are all accountable for education to some extent, perhaps the next question becomes: Accountable to whom? Each of us is, in some respects, accountable to society and to ourselves. Accountability does not mean that a written report must be prepared and presented to every member of society, or even to all taxpayers within a school district. What it does mean is that we should be capable of justifying our performance if called upon to do so. Our performance should be based upon educationally sound principles, particularly if the concept of accountability becomes recognized as a sharing of responsibility by all. Each of us is accountable to all others, and we must be willing to commit ourselves to the attainment of the goal that all students must leave school with at least the minimum skills needed for successful employment. If this is the goal of accountability, we once again have a reason for indicating a needed change in the educational system. Our schools seem to be doing a less-than-adequate job of preparing students to survive on their own, without close supervision.

Students seldom set their own goals, and when they are allowed to do so, the goals are usually the result of something stated in a textbook or by a teacher. School rules are arranged to determine or regulate student behavior. Each curriculum has a step-by-step sequence that must be followed. After completing their formal education in this highly regulated atmosphere, students are then expected to function effectively when they are placed in an atmosphere devoid of the crutches supplied by the school system. If that for which we are all accountable is a student's performance after he has left the educational system, then surely we must adjust our system and our own methods of teaching. More responsibility must be given to the students, but only after a predetermined knowledge base has been attained.

The purpose of enrollment in the educational system is for the student to attain a salable skill. When a student has graduated, we have in effect verified that the needed skills and knowledge have been attained. In the recent past, schools have been held accountable by students who did not learn during their years in school. One high school student filed suit against the school system, when after 12 years of school the student still could not read, yet had received a diploma declaring him ready to face the world. Who should be held accountable?

In another situation a college student filed suit against the school she was attending and against the teacher of a basic business methods course. She maintained that she had completed all of the course requirements, had received a grade of "A," and yet had learned nothing about teaching basic business subjects. Who should be held accountable?

The entire question of who is accountable to whom and for what "may come to the point where mutual trust and respect on the part of community, supervisors, and teachers will allow for an effective sharing of responsibility, and each will acknowledge that it is inevitably accountable to the others and can neither monopolize nor evade its part."[4]

## ACCOUNTABILITY IN BUSINESS EDUCATION

What are the implications of the theory of accountability for business education teachers? Business teachers have generally been considered accountable in the past, regardless of whether or not an actual evaluation occurred. Thus what has concerned us in the past and must continue to concern us in the future is the improvement of our performance as measured by the performance of our students.

Our performance is more readily noticed than that of many other teachers because of the immediacy with which our graduates must apply their skills and knowledge. The vocational nature of business education makes the effectiveness of our teaching easily recognizable. We must make certain that the recognition is positive rather than negative.

Positive recognition of our effectiveness can be a tremendous job-seeking advantage for our students. Businessmen who are pleased with the performance of our graduates will be willing to hire more of them and will usually inform their colleagues about an excellent educational program. It is up to us to make certain that our students are capable of performing up to businessmen's standards. How can this be done?

It is important that we know what the potential employers of our students consider to be important characteristics. Surveys of employers have consistently indicated three negative factors: (1) absenteeism, (2) inability to follow instructions, and (3) a lack of interest or an unwillingness to learn. What does this mean to business teachers? Can we teach these traits in the classroom?

Business education has more potential than many other areas for correcting these negative traits in our students. Cooperative work experience programs allow our students to learn the importance of attendance, promptness, willingness to learn, and following instructions before their livelihood depends on it.

Part of the teaching of these traits demands that business teachers project a professional image in the classroom. Projecting a professional image does not mean that teachers must be stodgy, stuffy, and aloof. It means that we must dress appropriately; we must be in our classroom when

[4]Lovett, Robert. "Professional Accountability in the Schools." *Accountability in American Education.* Boston: Allyn and Bacon, 1972. p. 133.

class is scheduled to begin; we must exude enthusiasm for our work; we must give instructions clearly and explain why work should be performed in the designated manner. The importance of the image a teacher creates cannot be overemphasized. A teacher's influence, positive or negative, is often the result of "little things," all individually difficult to measure and evaluate, but with an overall effect that is usually easily noticeable.

Application of the theory of accountability may have some general consequences, both good and bad. It might require that we reevaluate our objectives and how they are achieved. It might require educators to work harder or result in the loss of some "academic freedom." It might force us to make changes in our methods of evaluation and attempt to evaluate things previously ignored.

Application of the concept of accountability for business education teachers should not result in a unique and traumatic experience. It is a topic about which we have been concerned for many years. Perhaps the application of the accountability concept should be readily welcomed by business education teachers. Those who have been doing an effective job may finally receive well-earned and long-deserved recognition by all of academia, as well as the general public. Those who do not fare well in the accountability evaluation may discover where they are weak and thus have some guidance in their ongoing effort to improve. Employers have long known about the performance of business students and their teachers; accountability may let everyone know about that performance.

The theory of accountability has significant merit. Its success may depend on the development of reliable and valid techniques for measuring and evaluating accountability. Without this development, little improvement is likely to be seen in teacher and student performance. We cannot purchase a bottle of cheap wine, pour it into a fancy bottle with a French label, and expect its quality to improve!

CHAPTER 5

# Student and Teacher Accountability

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Accountability, a concern of everyone in the educational process, equates the degree of educational effectiveness with funds expended. The cost of public and private education at all levels has reached monumental proportions; therefore, taxpayers and legislators, faced with providing funds for education, are demanding an accounting. Thus, accountability is with us.

Attaining success in the classroom is a function of both the student (the recipient) and the teacher (the communicator). Therefore, responsibility on the part of both teacher and student is called for. The teacher, however, has really never escaped accountability of some sort—getting fired, for example, has always been a possibility. Students, too, throughout history have been held accountable through grading and promotion/retention.

## DEVELOPMENT OF ACCOUNTABILITY

Leon Lessinger—although only in his forties—is often called the originator of educational accountability.[1] He states that accountability in education involves promises and the fulfillment of promises on the part of both teacher and students—as well as others in the school system, such as administrators. But accountability is not a modern phenomenon. Precedents appear in the literature of ancient Greece and Rome. The Victorian code placed full responsibility on the teacher and the school and left the student unaccountable. The English argument of a century ago supported payment for results obtained. Throughout the history of education, the accountability philosophy reappears frequently.

Keppel, during his term as U.S. Commissioner of Education (1962-65), pointed out that the determination of educational success in the United States is one of the duties of the U.S. Office of Education. He ascertained that there was available information about the cost, the facilities used, and the personnel employed—but little was known about results obtained. His activities resulted in the development of a national assessment program, a plan which provided a systematic way to determine the skills, knowledge, and attitudes (the results obtained) of students.

[1] Lessinger, Leon. *Every Kid a Winner: Accountability in Education*. New York: Simon and Schuster, 1970.

Thus, the National Assessment Program of Educational Progress has paved the way to assessing the progress of large groups of students and the ability of the teachers to produce results. Such an assessment has been made not to hold the students or teachers accountable but rather to get some national reading on what the schools are doing. The National Assessment Program was based on objectives set forth for various age groups. These objectives were written, refined, subjected to many review groups, and rewritten several times. The assessment instruments were based on these objectives. The whole idea of this program, of course, was to get some measurement of what is going on in the schools today.

Although assessment was a definite step toward accountability in our educational system, it was not the total answer. It was designed to provide general information about output, but did not supply the specific answers needed for input.

One known weakness of the assessment program concerned treating the teaching profession as a science, which it is not. Teaching is an art. So those who support assessment, as well as those who have doubts about it, have reservations about the ultimate use of the results.

To hold the teacher or the student accountable, the raw material (the abilities and performance of the student and the teacher) must be assessed. We cannot measure performance, compare it with other performance, and expect meaningful results if we do not in some way evaluate what we started with. Any assessment, in order to provide useful results must take into consideration the starting point and abilities of those being assessed. For instance, if we are going to hold typing teachers accountable by measuring their students' typing abilities, say at the end of a one-year course, we must take into consideration the types of students each teacher started with. If one teacher happens to be teaching students of low ability or a class where counselors put slow learners in typewriting, it is obviously unrealistic to compare that teacher's results with those of a teacher who has high ability students.

Several business education research assessment efforts have been completed. Even though some of the research attempted to compensate for the "raw material factor" and to use the results to improve instruction in business education, one difficulty persists: converting general information based on inadequacies observed into definite classroom activities and teacher performance designed to improve student learning.

So, what we have at this point is assessment programs designed to fill one information need—the output. Other types of assessment are needed for information from which we can design educational improvements.

We are in the process of making teachers and students aware that they are being held accountable, but refinements will have to be made before accountability in education becomes reliable and workable. Yes, accountability sounds good, but the details of programs of assessment are not yet complete enough to make a system of accountability work for the benefit of teachers, students, administrators, and legislators.

## THE REASON FOR THE CURRENT EMPHASIS ON ACCOUNTABILITY

The concept implied in our history of the behavior of students and teachers is that education involves both active and passive participants—that is, teachers teach and students learn. At one time schools were considered as places of opportunity. Poor teaching, uninteresting subject matter, and a colorless environment were irrelevant. The better students would learn and the others would fail—regardless of the circumstances. In such a setting, nearly all the responsibility fell on the student. Others in the school system seemed to slough off responsibility. In fact, the student's attendance was interpreted to mean that he would do what the teacher asked and exert every effort to learn and pass.

As time passed, society in general became less and less sure of just what should be accomplished in the schools. As a result of the lack of clearly stated objectives, the schools became involved in trying to satisfy almost every human need. Teachers seemed immune from being held accountable for what was learned by their students. Since they were expected to do all things, they could not be called failures—even though they could not claim success. Teachers did not have to face the fact that they themselves might be incompetent. Grades, failure, and promotion placed the responsibility for learning on the student, in spite of the teacher's competence or incompetence.

During the past 20 to 30 years, we have appeared, however, to be trying to make up for the time when only the student was held accountable and the performance of the teacher seemed unimportant. During these last two or three decades the finger has been pointed at the teachers, who have been told they were unsuccessful, unprepared, lacked feeling, were not creative, were lazy, and were even mean. Failure for the student, during this period, was practically unheard of. Social passing was widely practiced. The teacher became the one to be held accountable rather than the student. We now realize that responsibility should be shared—no one person should have most of the responsibility.

Other factors have contributed to the emphasis on accountability in education. Two of these are: (1) costs of education have increased and (2) professional authority has been rejected by large segments of the public, including students. At the same time, we have seen the poor, the disadvantaged, and others demand participation in both the decision making and the operating process of our school system.

Studies show that the American education system probably is the most expensive in the world. Management seems to be lacking. Accountability is an effort to correct these conditions. Our commitment now is that every child can and shall learn. We now say that actual performance should be the intended performance. This goal leads to changing any educational process that does not produce the desired end results and substituting one that does provide desired results.

Justification for the current emphasis on accountability, however, comes only when both teacher and student, and everyone else concerned, share the responsibility for the end results. We now know that neither the

teacher nor the student can play the passive role—both must be involved and responsible. The public and the administrators must also be involved and held accountable. This multiple involvement and accountability is particularly important in the business education area where students are learning definite, salable skills and attitudes.

## THE RESPONSIBILITY OF THE TEACHER AND THE STUDENT

Everyone in the education process, including the general public who decide how much to spend on education and the administrators who make the many crucial decisions that control the education of our children, should assume responsibility for the end results. The focus of attention, however, is on the teacher and the student. Each plays a unique, but definite, role in the education process.

In the past, the teacher was considered by everyone to be the trained expert who was to transmit knowledge to a group of eager and unknowing students. The teacher's role was major; the student's minor. The student expected the teacher to teach him, and the teacher tried to do it. Time and research have shown that such an arrangement teaches irresponsibility rather than responsibility—which is the opposite of what we want to achieve.

To develop responsibility in the learning process, there must be balanced exchange between the teacher and the student. Learning requires action as well as reaction. There must be a feeling that the classroom belongs to the teacher and to the students and that they all assume responsibility for what happens there.

We must move away from stereotyping in the classroom. Students must be allowed to be individuals. A climate of individuality helps students build self-confidence and assume responsibility.

This kind of teaching and learning frequently occurs in cooperative business education programs. Students in these classes do assume responsibility for their learning in the classroom and on the job where they learn through work experience. They learn that work involves interacting with other people and that they must learn to interact and communicate with others. This attitude can carry over into the classroom and possibly make the teaching of responsibility easier.

But in all business classes, the teacher and the student must know their responsibilities. Both must work together in establishing learning goals.

*The teacher's responsibilities.* The teacher's input, regardless of the method used, often affects the students more than the teacher thinks. Each teacher is unique, and most are aware that it is the quality of teaching that counts—not the length of time one has taught. More of something, such as experience, is not always better. With this thought in mind, it is important that we examine teacher's responsibilities in the classroom.

We know that if students are not motivated, few of them think or learn as they sit in the classroom. We also know that students respect teachers not so much for their personality as for their taking a firm hold of the students and of the learning situation.

Motivation, then, appears to be a key responsibility of every teacher—however it is achieved. Motivating students often calls for change on the part of the teacher, a change which requires courage. Creativity is another ingredient of motivation—an ingredient that can be developed.

Developing a positive self-image in a student is a motivating tool. The teacher must find what students like and can do well. Each student is different. To understand each one's needs requires considerable effort and thought. To gain a good self-image, students must be encouraged to initiate inquiry and be allowed opportunities to gain self-confidence.

Self-confidence is developed by allowing the students to know that they can be good at something or that they are at least improving. Often students achieve because the teacher has been able to make them think they can.

Motivation includes letting students be themselves. In other words, less and less stereotyping. Students like to do things their own way, so the teacher needs to develop some way to allow students to be themselves and to relate what is being taught to an area of interest of the individual student.

Teachers should attempt to get across to students that they should know where they want to go and what they want to do; they should encourage students to be not simply good—but to excel in something. Just being good at something doesn't help one find his rightful place in society—but excelling in something does.

So, motivation is a major responsibility of the teacher. Motivating students involves creating self-confidence in each student and making each one aware that he or she is a responsible human being with attainable goals.

Another key responsibility of the teacher is creating an atmosphere in which learning can take place. To do this the teacher must make the task relate to the learner, suggest sources of information, and serve as a resource person. No longer is the teacher expected to spend the class period lecturing. In fact, the most learning often takes place when the teacher is silent. It is, of course, the teacher's responsibility to monitor each student's progress, keep records on achievements, and let the student know the consequences of not completing required tasks. To create an atmosphere conducive to learning, the teacher must be trustworthy, accountable, and involved with the students in the classroom.

Another major task of the responsible business teacher is to research the availability of jobs, to determine the character of such jobs, and the achievement of students to fill the positions. Also, a mechanism must be developed for identifying the new positions that will be available in the future. The following step is to develop materials to use in the classroom to meet future needs.

*Becoming accountable.* Teachers can fail in accountability in two ways: (1) they can fail to produce acceptable results—that is, students who are not well trained; (2) or they may perform well enough but not produce evidence of success. In other words, the teacher does the job well but does not have evidence that students have learned, which means that the results must be taken on good faith. Accountability, however, implies that good

faith is not enough. There must be some way to measure results so that parents, other teachers, administrators, the public, and the students themselves know that the teacher has been responsible and accountable. The end results must show that intended learning has taken place.

A method by which the business education teacher can achieve a measure of such accountability is to structure situations in which the business student can plan work, decide priorities for work, hear complaints, give oral instructions to others, read incoming mail, instruct new employees, plan work for others, do committee work, select and order office functions, decide what should come next, what is most important, least important, etc. These are some of the experiences business students should have regardless of the program they go through. Of course, some of the new word processing programs, simulated office programs, and some of the newer concepts found in our texts do include these learning tasks. These kinds of experiences should make students more responsible and accountable in general and particularly when they become employees.

Teachers should be held accountable only for those educational outcomes that they can affect by their actions or decisions. They should not be held accountable for a degree of progress not possible when student skills and attitudes were inadequate when the class began. For example, a business mathematics or office machines teacher should not be held accountable for the achievement of students if their abilities and attitudes are inadequate when instruction begins. Some students in the class might not know the fundamentals—how to add, subtract, multiply, or divide. In the same class, some students might have a clear understanding not only of the basics but of more advanced concepts as well.

These kinds of differences in students in the same class should be known so that accountability is on an individual basis. A way to measure individual student skills and abilities—or lack of them—is through pretests. Posttests can then be used to determine the level at which each student has mastered a given skill or acquired certain knowledge.

The point is that some students are deficient in basic education—reading ability, basic grammar, and arithmetic—when they enter the business classroom. Such deficiencies impede both the learning and teaching process. In business classes where programs are structured to prepare students to enter, advance, and refine prescribed competencies requisite for employment, such deficiences present a major problem. It seems, therefore, that pretests should become a standard requirement in all business classes if the teacher is to be held accountable for the posttest results. The amount of progress that occurs between a beginning and ending point is more relevant to teacher accountability than is achievement of predetermined goals, even though the latter is important for proper preparation of business students.

*The student's responsibility.* The student must also assume responsibilities if education is to be successful. Early in the education process, the student should be encouraged to look inward to discover basic interests, needs, talents, and limitations. As much understanding as possible should be conveyed to the student that both work and satisfaction in life depend

upon the extent to which outlets for abilities, interests, personality traits, and values can be found. Certainly, the role of the school and the teacher in this process should be made clear. But, most of all, the student should understand that education is something that will continue throughout life and is largely an individual responsibility under one's own control.

From the student's viewpoint, some of the problems of assuming responsibility for education are finding enough study time, making every effort to understand what they hear, and knowing what the teacher expects. Teachers should take note of such student problems and assume the responsibility for helping students solve them. Students should be made to understand that they are being held responsible only for actions or decisions over which they have control, and they should be encouraged to use their full abilities and assume responsibility for their own learning.

## PROBLEMS IN ACCOUNTABILITY

It's hard to determine which came first, accountability or assessment, for they go hand in hand. If we can assess the students, we can hold both the students and the teachers accountable for student progress. However, truly determining both the starting point and the output of a particular set of students and the contribution of the teacher to those students is difficult.

Some of the problems in the accountability process are resistance to change, apathy, lack of program objectives, and lack of ability to clearly identify the starting point at which the students begin a particular classroom experience. Overcoming the resistance to change has been difficult for many teachers. They make comments such as, "Have we gone back a hundred years, to teaching for a specific set of goals rather than teaching for the sake of education?" At one time students were asked to take Regents Examinations, or something similar, at the end of certain courses or programs. As changes occurred in our psychology and philosophy of education, we began to revise this approach to education and began to teach for the "whole child." Some voices in the educational world today are saying that accountability is merely a return to the old regent-type examination for students.

Apathy is with us and will continue to be with us. Motivation, of course, is one attempt to erase apathy. But some apathy on the part of the students and, indeed, on the part of some teachers will be with us forever.

Unfortunately, some business teachers don't know the objectives of their own programs. Until the teachers are willing to assume the responsibility for knowing and articulating their objectives, there is little possibility that students will assume the proper responsibility for learning. Indeed, assessments cannot be made if we do not know the program goals.

Preassessment may well take care of the problem of determining what we are starting with in terms of student ability, but the placement of responsibility is still a problem. Some suggestions for placing responsibility might include changing the school systems into more manageable units, that is, more decentralization; give the communities in which the schools are located more responsibility for interaction with teachers and students in the

school system. In the cooperative business education programs many believe that we are already achieving placement of responsibility to some degree. In these programs, the business community is involved in the success or failure of students from our business classrooms. Perhaps consideration should be given to more programs of this type as part of the learning process.

## ACCOUNTABILITY FOR BUSINESS EDUCATION

Business education lends itself, as far as most of the coursework is concerned, to easy assessment. Objectives can be formulated. Stating criterion-referenced objectives for many of the skill and vocationally oriented business education courses is rather easy. The cooperative courses in business education are easily assessed. In addition to having the teacher's objectives, in cooperative courses we also have the objectives of the employers. Such courses can easily be based on competencies and these competencies can easily be measured. At the University of Florida, for example, such criterion-referenced objectives and measuring instruments for typewriting communications were written and field-tested. However, the "raw material" factor must still be considered when using these assessment instruments where the competencies or specific objectives are detailed if these test results are to be used in accountability measures.

The Vocational Technical Education Consortium of the States, which involves 13 states and 2 branches of the military, is currently involved in producing V'TECS catalogs. These catalogs, which specify job competencies and activities for achieving those competencies, are being produced for several jobs, such as bank teller, data processing, and auto mechanics. This is but one of the large-scale attempts being made to turn vocational courses into a set of specific competencies with specific objectives and specific activities for achieving those objectives and meeting those competencies. This type of program uses the competency-based instruction theory. It moves away from the norm-referenced evaluation into specific criterion-referenced evaluation. Performance objectives are stated and performance guides are given for each task. Little doubt remains about the teacher's and student's responsibility in this type of programmed material.

On the college level we find our business teacher education programs moving into a competency-based format. Many colleges and universities have moved in this direction. However, we should be careful not to teach only for specific performance or specific facts. Teachers must still be more than directors of how-to-do; they must also be directors in helping students understand themselves and their responsibilities as well as helping them to learn to relate to and communicate with others.

Probably teachers of business subjects are further ahead in accountability concepts than are teachers in most other disciplines. Business teachers over the years, because their end product is an employable person, have perhaps been forced into accountability much sooner and more completely than have other teachers. Business teachers have been held immediately accountable by the employers of their students. So accountability is prob-

ably less strange and less threatening to business teachers and other vocational teachers than it is to teachers of English, history, social studies, etc.

Business teachers have the opportunity to lead the way in accountability, but they must be sure they are not leaving out the broad education of their students by substituting only that which can be easily measured. They must not teach only for facts and job performance, leaving out the other essential parts of the well-educated student. Holding both students and teachers accountable is good, but only if it can be done without destroying the desired end product of our school system, an individual who can both think and perform intelligently.

CHAPTER 6

# Administrator Accountability

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The accountability of administrators to educate for business in an economically free society is vital. Parents, students, taxpayers, and legislators have the right to know the how's and why's of education for business and to hold administrators responsible for the success or failure of the programs. Because the questions asked of administrators of business programs come from many sources, accountability becomes a multidimensional process. This chapter discusses the constituencies to whom business administrators are accountable: faculty, students, administration, governing boards, the community, and the profession. In addition, administrators are accountable to themselves.

## ACCOUNTABILITY TO FACULTY

Perhaps administrators spend the greatest amount of their time, energy, and resources with faculty. Principles of management, which are an important part of the business curriculum, should also be practiced by administrators in varying degrees. In the minds of their faculty, ranging from new to experienced, administrators are accountable in varying degrees for the success of programs. Most faculty members expect to be listened to, to be understood, and to be given guidance.

The acceptance or rejection of management styles or administrative skills can be viewed differently. As administrators assign teaching loads, decide which courses are to be taught, assign duties such as serving on committees, and negotiate contracts, the faculty will develop subjective observations which are often expressed in terms of accountability. The administrator of business programs is also judged by expertise in moving from formulating administrative policy to implementing it on the faculty level.

The department chairperson, conversely, must present data to a supervisor—an assistant principal, principal, assistant superintendent, a dean, a vice-president, or a president. Supervisory administrators use such data to develop policy which is passed downward for implementation by the administrator of business programs. Administrators of business programs are held accountable for successful implementation of such policy.

Administrators' accountability to the faculty is an important, sensitive, and demanding area. The measuring devices of accountability are generally

viewed in both quantitative and qualitative measures. Rating scales used in various evaluation devices are often administered. Subjective comments, found in either written or verbal communication, are also useful.

The success or failure of an administrator can generally be traced to the relations with faculty. However, it should be noted that the environment, situation, and circumstances are not the same in all areas of education, and success or failure can result in different settings.

## ACCOUNTABILITY TO STUDENTS

Because the product of education is the student, a considerable amount of time and effort of the administrator must be directed to students. The administrator must be held accountable for assuring that curriculums are developed that provide students with the academics, preparation in skills, knowledges, and attitudes that will produce successful results.

Administrators must hold to a position of equal representation of all groups. The responsibility to account for class schedules, course offerings, clubs and organizations, cooperative programs, and other student activities is a major consideration. Students should be shown that they are offered the best programming and services.

The commitment to combine ethnic groups, sex modes, and age groups with varying abilities merits full understanding by administrators. During a period when society and education are more aware of equality for all, representation by all groups and individuals within an educational program is essential. Meeting priorities requires a combination of budgeting and demand balances. Student involvement in the establishment and implementation of priorities will help to insure student fulfillment.

## ACCOUNTABILITY TO ADMINISTRATORS

In the chain of management an administrator always seems to have other administrators to whom he must listen or to whom he must report. Business administrators must be held accountable by the central administration for planning, programming, implementing, and reporting progress and results. In order to establish program needs, budgetary requirements, accreditation, and general support a systematic procedure is essential. Regardless of the position title or area of responsibility those individuals to whom business administrators report desire accurate and up-to-date information.

The flow of information needed for clear identification of what is currently under way or projected becomes a means of measuring accountability. Beginning with department chairpersons up to the governing boards, written reports are evidence of accountability. This process is a two-way procedure. A downward flow of information from those to whom an administrator of business programs reports is also necessary in order to implement daily operations consistent with program planning.

## ACCOUNTABILITY TO BOARDS

Boards charged by electorates and legislatures with policy development also expect effective, timely data. As administrators of business programs plan and implement programs and activities, governing boards must be kept informed. Whether the governing body is on the secondary or postsecondary level, the data and documentation presented for decision making is the responsibility of the administrator of business programs. Generally the success of business education programs can be traced to effective communication by the business administrator. Boards expect and appreciate information that permits a clearer understanding of programs. The boards, via top administration, will hold business administrators accountable.

Advisory boards, community boards, governmental boards, and economic or business boards should be viewed as an avenue for positive program development. Through the involvement of business administrators with these groups the process of accountability is eased. Seeking advice and direction from others generally helps clarify the direction of programs. Alert and effective business education administrators will definitely benefit by being involved with these various groups.

## ACCOUNTABILITY THROUGH FORMS AND REPORTS

When administrators develop working relationships with both internal and external individuals and groups, information is often presented by means of forms and reports. These documents are either standardized or individually developed. Several types or areas of reporting include budgets; staffing patterns; curriculums, proposed and implemented; monthly, quarterly, or annual reports; committee and faculty agenda and minutes; evaluations; and daily routine communications.

Budgets are generally prepared annually for current operating expenses, travel, capital items, and salaries. Projections are often made for more than one year. Activity budget reports during the current year of operation are expected either monthly or quarterly. This form of accountability, a management function, is very visible. All business administrators are expected to use standard forms and timely reports in order to account for their financing.

Staffing patterns are generally prepared annually for budget purposes and employment practices. The need for additional monies for positions as well as new employees is accounted for through documentation. Justification usually is expected in addition to the statistical presentation. The retention or termination of employees will necessitate documentation, as will promotions, tenure, and salary increases. The business administrator will be held accountable for legal and proper procedures dealing with faculty and staff. Effective communications underlies these administrative activities.

As curriculums are proposed or implemented, data relevant to the cause and effect will be needed. As faculty, committees, and administrators judge curriculum, written justification is necessary. How new programs or

courses affect enrollment, costs, scheduling, staffing, and quality are questions that must be answered to the satisfaction of those who hold administrators accountable.

Summary reports of business areas are generally used as information materials and as a basis for planning based on past and future needs. Management by objectives can be utilized and incorporated with performance contracts. The reports are often used as a basis for evaluating administrators.

Agendas for committee, department, and faculty meetings should be carefully prepared, and the development and progress of these groups should be reported and documented for reference as well as direction. Daily communications should, when at all possible, be placed in writing. Future reference to these documents definitely helps in the decision-making process and as positive indicators for business administration accountability.

## ACCOUNTABILITY TO SELF

Last, but certainly not of least importance, is the process of an ongoing self-accountability. As the business administrator plans, develops, implements, and reports the results of programming, self-evaluation plays a significant role in the total scheme of administration. Practices that demonstrate integrity, dependability, fairness, creativity, and overall positive relations for development are essential. Business administrators can improve the programs and support these developments if they practice self-evaluation and accountability.

Self-evaluation involves reference to past experience as well as planning for the future. As the business administrator asks himself questions, the paramount concern should be one of respect personally and professionally for himself and others. As colleagues and peers view the business administrator and hold him accountable, they are generally asking: Was the decision fair, truthful, and beneficial to all? Did actions contribute to goodwill? Planning by the business administrator keeping these practices in mind will generally produce appropriate decisions.

## SUMMARY

Accountability for an administrator of business programs has many facets. Regardless of the level of responsibility, degrees of accountability vary. The number of constituencies also varies.

Those who have been administrators, those who are administrators, and those who will be administrators must recognize, accept, and practice behavior that reflects accountability. Governance at all levels is a shared responsibility.

As business educators and administrators reflect historically and plan for the future, accountability must retain high priority. The thrust and direction is, to a large extent, determined by the administrators and their ability to deal with programs. By viewing the process of accountability as a positive principle, the outcomes experienced will be rewarding.

CHAPTER 7

# Employer Accountability

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For what should an employer be held accountable? To whom should an employer be accountable? A related question might also be, "Should educators expect employers to be accountable to them and to their students?"

Not long ago, an employer was discussing these questions. His reaction was:

> My primary accountability has to be to my board of directors and to my stockholders. The onus is on me to produce an ever-increasing profit picture; and this picture is measured in terms of the short-, not the long-run. However, I'm also told by various pressure groups that I'm accountable for providing product safety, for providing a healthy environment, and for just generally improving the quality of life. In addition, I'm supposed to be accountable to my own employees for being certain they are happy and productive in their work. I also am told I should be accountable to the community in which the business operates, and this accountability includes the schools. That's a tall order!

The remarks of that employer reflect feelings of frustration and agitation that are often generated by the multiplicity of demands constantly being directed toward such people. His concerns and reactions are particularly legitimatized, too, when framed in the total profit picture. Stockholders and boards of directors do hold employers accountable for short-term profits and press for a better profit picture each quarter. This profit accountability, however, need not completely eclipse other areas of accountability. The accountability of an employer, if properly directed, could dovetail into the accountability of the educational and social community for a mutually profitable blend. That is, the blend would combine the interests and talents of employers, the skills and aspirations of students, the objectives and concerns of educational personnel, and the expectations of the social community. This accountability, if handled correctly, should increase productivity for the employer, should provide a better education for students, should encourage teachers to teach more effectively, and should provide better products for society.

## ACCOUNTABILITY TO EDUCATION

The accountability that educators could expect from an employer would be for employers to work closely with the educational community so that a "fit" occurs between what is taught in the schools and what is prac-

ticed in the work environment. What processes, then, are available to employers to enable them to facilitate this "fit"? Following are some which seem to be the most viable.

*Cooperative education.* Of all educational methods available, the cooperative method appears to be the best for helping the employer maximize accountability to the education system. That is, this process provides the most hope for establishing the "fit" between education and work. Some elements of nearly all disciplines cannot be taught effectively in the classroom; they do require practical experience for mastery.

Cooperative education coordinators who work closely with employers generally express surprise about the time employers willingly and eagerly spend with them. Frequently, the conversations between employers and coordinators revolve around employees hired in the past and the kinds of weaknesses and strengths exhibited by them. Feedback of this sort is, of course, invaluable for those running educational programs. Reactions from employers are discussed in faculty meetings, in advisory committee meetings, and with individual faculty members and administrators. Adjustments in programs, methods, and attitudes, usually made as a result of these kinds of conversations, result in a better "fit" the next time a student is hired. For those employed under the cooperative program, weaknesses are, of course, constantly being identified, remedial training is being given, and an immediate improved "fit" is assured.

When an employer elects to participate in a cooperative program, an avenue for accountability from the employer to the school is created. Everybody usually gains under this plan. The employer, provided with enthusiastic, motivated students, generates a reservoir of trained people ready for full-time placement. Students are provided with paid employment directly related to their career goals. Educators are provided with a direct communicative link to supervisors and employers who hire students. The cooperative education method, then, is a facilitator for creating an accountability flow from employers to educators and back.

*Advisory committees.* As members of advisory committees, employers have opportunities to work closely with educators in developing and maintaining programs that are realistic and contemporary. Employers from business and industry who are competent, who are leaders, who are supportive of educational programs, and who are employers or prospective employers of students should be chosen to serve on advisory committees. Although participation as a member of an advisory committee does take time and energy, the rewards nearly always justify the investment of both.

The dialogue generated among advisory committee members, faculty, and administrators is often enlightening for all who work on and with such committees. An example of this process occurred when a member of an advisory committee questioned a department chairman rather closely about the training being given on word processing equipment. The advisory committee member was an owner of a large business which used such equipment extensively. He could not understand why every student in a secretarial program could not be trained during the first year to operate word

processing machinery. The department chairman explained the problems inherent in attempting to train 400 students on that equipment. When the employer learned of the budget, time, and manpower restraints, he volunteered to take students into his business for "on the job" training and arranged for several more such stations for other secretarial students.

Another advisory committee arranged for business instructors to be placed in summer jobs that were representative of those positions for which their students were being trained. This experience proved to be tremendously valuable for the instructors who participated. The employers were happy, too, because the job "fit" for students being trained was more effectively insured.

In addition to activities normally expected of advisory committees, such groups have sponsored special workshops, arranged for cooperative work stations for students, done public relations work for educational institutions, and provided people with unique areas of expertise to work with students and faculty. Educators are often surprised at the willingness of employers to invest personally in these committees. At the same time, advisory committee members usually respond so favorably to such requests that one would reasonably assume the quality of the "fit" felt by them must certainly be enhanced from such involvement.

Accountability for employers contained in the context of serving as members of advisory committees is often a palatable reference to accountability for employers. These people seem to appreciate the opportunity to help shape curriculums and to work with faculties.

*Classroom resources.* Although the best method for getting the most effective student-job "fit" is getting the student on the job in a working environment, such placement is often not possible. An acceptable alternative, then, is getting the employer to the classroom. The guest speaker concept has, of course, been used since education began; and this concept is still a viable activity if utilized correctly.

If employers are to make a significant impact on groups of students, they need to understand exactly why they are being invited. A class may have a problem the employer could help solve, they might need to know how it "really is" in business, or they may need more information on a particular subject than is readily available. In any event, employers normally come willingly if they know they are contributing to the job "fit." Educators who ask these people to come should take time to brief an employer, to prepare students, and to be certain the total environment is facilitating.

*Other activities.* Employers perform many other functions and services for educators. They invite tours of students and faculties to their businesses; they often provide financial support, specialized equipment, or art objects for schools; and they work for increased community support for the educational system.

In addition, these people are often legislators who become accountable to their constituents as well as to their boards and stockholders. However,

in this capacity, they are also accountable for being certain the educational system is capable of growing and developing and is financed properly.

The conclusion can be drawn, then, that employers expect some accountability from them to the educational community (which is also reflected in the social structure) so long as they are assured of a more reasonable "fit" between an employee and his or her job.

## ACCOUNTABILITY TO EMPLOYEES

A primary area of accountability for employers revolves around the work arena itself. Educators need to be particularly aware of this responsibility, inasmuch as many of the people they are training will eventually be employers of others.

Two major premises appear to govern the manner in which employers express their philosophy of accountability to employees. The first of these is that the only accountability an employer has is to provide that person with a job and those benefits required by law. The second premise is that human values are legitimate rights and that these rights should be recognized by employers. If the first premise is followed, either consciously or unconsciously, the employer normally adheres to an authoritarian, autocratic management approach that leaves the employee little room for autonomy, creativity, or personal growth inherent in a philosophy which values human rights.

Even operating under this premise, however, there have been gigantic gains in the feeling of responsibility an employer has for an employee since the "sweatshop" approach a century ago. During that time, workers were used and discarded at will, much like the machinery they were responsible for running. They were bought at the lowest price possible and used to the fullest extent possible. When their usefulness had peaked and they were obviously on the way down, they were "junked" and replaced by a new "automated man," and the same painful process would begin again.

Shortly after the turn of the century, the pervading view of management espoused by Frederick W. Taylor, often referred to as the father of scientific management, was that if jobs can be performed more profitably with extreme specialization, the same principle could also apply to men. He believed that there was one best way to perform a particular function, whether it be threading a needle or writing a shorthand outline. Taylor's concept was, of course, viable and served as a forerunner to the more modern practice of looking very carefully at those conditions that resulted in the greatest productivity from workers.

Interestingly, subsequent studies produced evidence that workers' productivity could be increased in other ways. These studies revealed that employees liked to be able to participate in decision making, they liked to be viewed with respect, they liked to feel as though they were a part of the "team," and they liked to feel as though they were making a personal contribution to the total effort. Managers who implemented these findings discovered that, indeed, productivity increased and turnover and absenteeism decreased.

These and similar studies, coupled with a trend in other areas toward humanizing the home, the educational setting, and the work environment, made employers more aware of their responsibility to scrutinize their relationships with their employees. Those who were farsighted saw the growing need to begin to become accountable to their employees by developing a healthy, growth-producing work environment.

The commitment to this kind of working environment constitutes commitment to the second premise—that of recognizing human values to the point of being accountable for improving the quality of employees' working lives. Drucker says:

> Because our society is rapidly becoming a society of organizations, all institutions, including business, will have to hold themselves accountable for the quality of life and will have to make fulfillment of basic social values, beliefs, and purposes a major objective of their continuing normal activities rather than a social responsibility that restrains or that lies outside of their normal main functions. Institutions will have to learn to make the quality of life compatible with their main tasks. In the business enterprise, this means that the attainment of the quality of life will have to be considered an opportunity to be converted by management into profitable business.[1]

If, as Drucker says, employers will have to hold themselves accountable for the quality of life and for fulfilling basic social values, beliefs, and purposes, these same employers must also be able to recognize those activities, experiences, and working conditions that stimulate an environment compatible with these principles. This recognition and accompanying accountability cannot exist unless an employer understands somewhat the profile of workers currently being hired.

Such a profile indicates the average American worker is seldom a deprived person. The welfare system is now such that physiological needs can be met without working.

Young people just entering the job market are expressing the need for work that is challenging and that contributes directly to the goals of the organization. They want to be involved in work that more fully utilizes a range of conceptual abilities and contributes to their own growth and development. These people seem to want and to expect in a job a fair amount of independence from ordinary kinds of controls. They express a desire for the opportunity to be given the responsibility for doing a job well and to have available support from their employers and supervisors as needed.[2]

Too, even though much is written about the "nonmaterialistic" movement, the American worker consumes greedily; and the young worker is not an exception. These young people reflect this attitude when they say they want jobs that pay "reasonably well." Moreover, even though there has been some talk of the "turn-off" of young people from big business, young workers are quite contented to work for large concerns so long as their expressed needs are met.

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[1]Drucker, Peter F. *Management Tasks, Responsibilities, Practices*. New York: Harper & Row, 1974. pp. 34-35.

[2]Whitsett, David. "The Great American Value Revolution: Who Are Our Employees Becoming?" Paper given at the American Management Association Personnel Conference, Chicago, Illinois. February 1976.

Employers who understand the needs of their workers, who are willing to be held accountable for improving the quality of life, and who want to provide the kind of environment that is growth-producing appear to have four primary areas of accountability that will facilitate their objectives. They are:

*1. Orientation to the job.* Normally, when a new worker is hired, both the worker and the employer or supervisor are nervous during the first meeting. Much of this anxiety would be eliminated if the employer were to implement a comprehensive orientation process through which both employer and employee expectations would be expressed. A uniform understanding needs to be reached on such issues as compensatory standards, salary and money policies, and a clarification of the kind of job enrichment the employee can expect.

The employee is eager to know about staff meetings, time on the job, relationships with other employees, and other job-related responsibilities. The employer needs time for working through expectations and for allowing the employee to express concerns and aspirations.

For example, an employer should be accountable for spelling out, in as precise terms as possible, when a job is to be done, how it is to be done, and the quality expected of the product. The employee should then have the opportunity to respond, and he or she might say: "It may take me a couple of weeks to learn to operate the machine that well." The employer then knows that full performance should not be expected for two weeks and will leave the worker alone during that time except when needed as a resource.

Much the same kind of process takes place in school with approximately the same kinds of positive or negative results, depending on how students are oriented. Youngsters normally come to school anxious and eager to know how a class will be operated. If the teacher gives information quickly, the process takes care of the "need to know," but there is no individualization in terms of students' interests or needs. If students participate, they tend to perform better. This principle holds true for the worker orientation process.

The orientation provides a clarification of role expectation between the employer and employee. They come to a unanimity of opinion on what the requirements of the job are. Employers who are concerned about improving the quality of workers' lives are willing to be accountable for the proper orientation of new employees.

*2. Employer commitment to legislation.* Workers just ready to become a part of the working arena infrequently mention pensions, health benefits, and other "fringes" as expectations. Rather than discounting these criteria as unimportant to those workers, however, employers would probably be more accurate to appraise such criteria as "just expected." That is, young workers view such benefits as minimum requirements for a job. They have, for the most part, been raised in homes where fathers and mothers were given such fringe benefits and have come to expect them as a part of the working package.

Most young workers are also going to their jobs with a fair idea of what

equal opportunity laws are and, consequently, of what hiring practices should be. They expect their employers to be accountable to today's laws that were yesterday's issues, even though perhaps the legislation may provoke mixed benefits. One young business college graduate was heard to wail, "I'm a middle-class, white male graduate—I don't have a thing going for me." Nevertheless, young workers in particular seem to have a "feel" for the fairness of this legislation, and they expect its enforcement.

A similar expectation for accountability to safety legislation exists among workers. They, together with society at large, expect employers to provide a safe working environment. Recent television documentaries and magazine and newspaper articles, together with some damaging litigation, have raised social consciousness and with it the responsibility for a working environment free from hazards.

*3. Evaluation and feedback.* Employers also need to be accountable for providing continuous feedback to their employees. Most workers want to know whether they are doing the kind of work expected of them. Many employers, though, seem to feel they have to protect their employees, or they feel inept at providing open and candid feedback. Statements are frequently made by them which reflect this feeling, such as: "I'm afraid to tell the truth or he'll have a bad attitude," "She won't listen if I do tell her what's wrong," or "He isn't interested in how well he is doing; he just wants to make some bucks."

The employer who lets workers guess about their performances is grossly unjust and creates a negative working environment. Workers have a "feeling" their performances aren't up to standard, and this "feeling" generates an unproductive and a dissatisfied employee. Employers who are committed to the second premise—the recognition of human values as rights—are willing to be accountable for consistent feedback.

Reactions from workers indicate they want a continuous flow of performance feedback. They are not so concerned about whether the feedback is positive or negative as they are about just having the feedback available. The conclusion drawn by child psychologists about children's attitudes toward their parents, "Beat me, but don't ignore me," seems to apply to the employer-employee relationship.

The feedback process should be based on *time, specificity, honesty,* and a *horizontal system.* That is, the employer must be certain that enough time has been allowed to do an adequate job, and time the communication properly; the feedback should be specific; the employer must give and expect honesty; and both employer and employee should participate equally in the communication process.

The employer must be certain that there is enough time for a two-way communication process to take place. Time is also important in another context; that is, the feedback should be given continuously. Feedback that is delayed creates frustration if good performance is not recognized and anger if an employee is called to account for poor performances long after they are over.

An employer might say, for example, "Jim, I noticed you had only four boxes to a row on your loads this morning. Normally, we consider it most efficient to use five." Jim then would be given the time to explain his position, and further exploration would take place. This approach is far better than telling Jim he had not been operating very efficiently lately. Vague and nebulous phrases such as "You're too talkative," "Your work lacks quality," or "You don't seem to be able to get along with the other workers," has little meaning unless tied to concrete incidents.

Accountable employers will not shy away from giving negative feedback, which is, of course, more difficult to give and gain acceptance of than is positive feedback. However, if even a minimum trust level has been established, the employer is much more likely to be heard. To be able to give such feedback effectively, honesty is critical, tempered with the unspoken message, "I value you as a person." "I'm here to help you, not to criticize you." Honesty, then, forms the base for all communication with an employee and builds the trust level necessary for an employer and employee to work well together. If an employer is committed to the principle of honesty, he recognizes that honesty is not limited to the conversation with the employee alone, but also means that he, as an employer, should be disciplined to provide a continuous flow of communication, to allow for time to talk with employees, to use recent and specific examples, and to work toward generating a climate of trust.

The communication process between an employer and an employee should be horizontal. That is, the employer should not set a "superior to inferior" tone. Therefore, employees should be able to discuss their reactions to communications from employers freely and honestly. Employers who generate this kind of atmosphere are rewarded because the process creates a vehicle through which they are able to get information about their own performances. Employers should be accountable for honest, consistent, concrete feedback. This accountability from employers reflects commitment to values, attitudes, and objectives of employees.

4. *Opportunities for personal growth.* Employees who are engaged in work that produces satisfaction for them appear to be those who see themselves as part of the "team," and they are involved in work that is challenging and rewarding.

Employers, then, who recognize that employees like some autonomy, want to feel as though they are a part of the decision-making process, and want to be challenged are willing to be accountable for designing and redesigning jobs so that these criteria are built into them. For example, one company employed many clerical people who handled routine processes only; one of their most frequent responsibilities was to answer the telephone and handle general kinds of questions. After in-depth discussions with supervisors, managers, and clerks, it was decided to give these clerical personnel the responsibility of handling more difficult telephone inquiries than they previously had. Although this recommendation produced some skepticism at first, absenteeism among the clerical workers dropped, quality and quantity standards improved, and the workers were able to handle their

increased decision-making responsibilities.

Occasionally, restructuring a work situation is not possible, particularly if the job consists of basically only one function. However, this situation does not negate the possibility of building pride into that job or of generating a sense of accomplishment in that worker. An example is that of a railroad worker who described his work enthusiastically to an interviewer. When asked what he liked most about the job, he responded: "I can set the spike with one tap and can drive it with two." The worker had set his own standards and was finding the challenge of competing with himself rewarding.

What is the employer's accountability for providing opportunities for growth in employees? Perhaps none. On the other hand, perhaps an ethical responsibility does exist to help develop a feeling of self-confidence, pride, and achievement in an individual. Although the question may be considered purely ethical in an accountability discussion, those who agree with Drucker's thesis will consider personal growth as a viable objective and one they subscribe to and are willing to be held accountable for.

If an employer has established a sound system of horizontal communication, he will know when an employee can handle a more stimulating job, when that employee is ready to prepare and give a speech, and when that employee is ready to assume a leadership position. If an employer has assumed the responsibility for being accountable for stimulating personal growth and development in employees, he will probably also give some attention to short- and long-term goal setting. Goal setting can be a very effective part of the continuous evaluation process. If employers utilize this concept effectively, employers and employees formulate the goals together (once again, in a horizontal situation) and check to see whether progress is being made. To be most effective, goals should be specific. A goal for a secretary might be to "answer every telephone call after only two rings." After a short period of time, perhaps a week or two, she and her supervisor will talk with one another to see whether this goal, together with others set previously, is realistic.

Other personal goals might be worked on, such as the ability to make verbal presentations effectively, the ability to be assertive, or the ability to conduct meetings efficiently. If an employer feels accountable for generating an environment of personal growth, some attention will be given to providing an opportunity for employees to review and make career plans with their employer. Frequently, employees will be enthusiastic about their jobs at the time they are hired, but they may become bored and want to move on. In such cases, perhaps some accountability should be felt by an employer for either making some change in the work environment or for moving an employee on to something new—either by promotion or transfer.

Promotion is, of course, a common practice accepted by all as a regenerating force. This practice contributes to one's feelings of self-esteem, provides a change in environment, and denotes a change in skills. It is usually accompanied by an increase in income. All of these conditions contribute to an employee's general feeling of excitement and growth.

The transfer process can also be valuable in making job changes if employers attach significance to the move and generate a positive feeling about it among employees. Although the lateral transfer is not utilized as often, it too is a viable way to move employees, particularly when the transfer results in a job for an employee that is more compatible with career goals and aspirations than the former position.[3]

Some guidelines for in-house career development might be to (1) set specific career objectives for those people who want to make career changes, (2) be realistic about and aware of the abilities of employees, (3) be realistic about the manpower needs of the company, and (4) provide experiences and resources for employees that facilitate career development.

In summary, an employer should be accountable for harmony between an employee and the job. That is, people in a company should be suited for and like their jobs insofar as possible. They also should be able to be productive in that position and to accomplish the objectives necessary to get the job done. An employer is a facilitator and an energizer to see that the homogeneous mixing occurs. Loving one's work need not be viewed as immoral. Wise employers should make an effort to reduce the dichotomy between work and play for their employees. This reduction is not accomplished by adding more ping-pong tables, but by getting the right person in the right job and by providing an on-going process for growth and development. "Work can be a joyful experience."[4]

## SUMMARY

Employers are frequently overwhelmed by the demands for accountability directed at them. Their first accountability is, of course, to their stockholders and boards of directors. This accountability revolves primarily around profit; however, other areas of accountability are also recognized as legitimate. Those most significant to educators are (1) the accountability of employers to the educational process itself and (2) the accountability of employers to their employees.

Employers are usually eager to foster a close working relationship between education and work so that a good job "fit" occurs for their employees, therefore, they do take some accountability for working with educators. Some of the most desirable processes available to them in this regard are working with the cooperative education program, serving as advisory committee members, serving as classroom resources, and performing other related services.

Business educators recognize that they are not only training people for specific kinds of jobs, they are also educating those who will eventually be employers themselves. For this reason, attention is given to those areas of employer accountability that generate positive attitudes and good work habits among employees. This kind of employer accountability revolves

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[3]Hall, Douglas T. and Francine S. "What's New in Career Management." *Organizational Dynamics*, Summer 1976. pp. 21-23.

[4]Maslow, Abraham H. *The Farther Reaches of Human Nature*. New York: Viking Press, 1971. p. 305.

around the premise that human values are legitimate rights that need to be recognized by employers. Therefore, employers need to be accountable for creating working atmospheres that encourage participative decision making, a fair amount of autonomy, and challenging work experiences.

Employers who are willing to accept accountability for improving the quality of their workers' lives, then, are willing to accept accountability for providing a growth-producing work environment. To do so, they need to be accountable for orienting their employees to their jobs, being committed to legislation affecting their employees, providing a continuous system of evaluation and feedback, and providing opportunities for personal growth. Employers who are committed to these principles do whatever they can, within reason, to make work a positive experience for their employees.

Employers, then, not only expect accountability, they accept it if they are assured of a better job "fit" for their employees and a better working environment for all.

# Part III

## EVALUATION IN BUSINESS EDUCATION

CHAPTER 8

# A Theory of Educational Evaluation

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Educational evaluation is a subject of wide interest. Authors who have written on the subject attest to this fact. For example, by actual count there are more than 200 separate *texts*, 300 separate *studies*, and uncounted *articles* on this topic housed within one university library.

Topics in this chapter are limited to an historical overview of educational evaluation and of business education evaluation, evaluation design and methodology, cost factors, and recommendations for evaluation. Examples and illustrations drawn from business education philosophy and methodology are used in discussing the broader scope of educational evaluation theory.

## A BRIEF HISTORY OF EDUCATIONAL EVALUATION

Throughout the centuries, without regard to political or physical boundaries, education largely served a very selective purpose—that of determining at each major juncture of schooling who was intellectually fit for continuing their education. The assumption that there existed an intellectual elite who must be screened from the masses unfortunately exists not only within our own country but in other countries as well. There is little argument that the early selective process of isolating children of "professional" parents for advanced education sidestepped the important elements of individual motivation, goal orientation, or even teacher encouragement and approval.

Our society has become more complex, and as we evolve into our postindustrial period, it appears even more evident that training an intellectual elite will fail to meet either individual or national goals. It is safe to assume, therefore, that an increasingly larger proportion of our total population will demand *some* advanced education beyond the secondary level.

Education, however, has long been viewed as a series of steps consisting of levels of ever-increasing difficulty and sophistication. As a student moves from one level to another, assessments are made as to his/her growth and ability to take on more difficult challenges both intellectually and socially.

The evaluative process—as indeed schooling itself—has been to weed out those with insufficient native abilities or acquired skills at the end of various stages of development, shunting them to a side track of different educational experiences or into the labor pool. American education, therefore, can be visualized as a pyramid with all young students attending school but with decreasing numbers in each succeeding stage.

Decisions about who would or could negotiate this climb from level to level have usually been based on results of individual examinations. Success generally breeds success, with those achieving at an earlier stage being rewarded with superior grades of A and B and those failing to succeed at the same level presented with D and F grades. As success breeds success, failure tends to breed failure. "To be physically (and legally) imprisoned in a school system for 10 or 12 years and to receive negative classifications repeatedly for this period of time must have a major detrimental effect on personality and character development."[1] However, it is the measurement of the degree to which established tasks have been achieved or not achieved that constitute the bulk of educational evaluation. Educational evaluation, therefore, may be considered an assessment of individuals who have performed (or failed to perform) a set of predetermined tasks within an established curriculum at set intervals during a 10- to 12-year period or longer.

Although few would quarrel with the need for such individual assessment and resultant classification, the methods of assessing and classifying have often differed widely over the years.[2] In early formal school training, for example, individual recitation was the prime method of evaluating a student's progress. A student's entire educational career often rested on responses that were made during one final recitation period with the instructor each term. In the medieval universities in Italy, France, and Germany, not only were students subjected to evaluation, but the professors were retained or dismissed based upon the quality and depth of their questioning. The fact that these same instructors were compensated at a rate based upon the number of students in their classes also kept the professors alert to changing student attitudes.

The oral form of testing extended to the American Colonies until the mid-1800's when Horace Mann developed the concept of written examinations to initially supplement and eventually replace the oral tests. The written exam, however, was not the panacea hoped for, as essay responses resulted in great subjectivity on the part of the evaluator. Early research studies indicated that swings of up to 64 percent were not uncommon when a particular essay examination was marked independently by 100 different teachers. It is also interesting to note that the shift to the objective-type test is only a relatively recent innovation, beginning in the 1930's.

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[1]Stringer, L.A., and Glidewell, J. C. "Early Detection of Emotional Illnesses in School Children." (Final Report) St. Louis: St. Louis County Health Department, 1967; in Bloom, Benjamin; Hastings, J. Thomas; and Madaus, George F. *Handbook on Formative and Summative Evaluation of Student Learning.* New York: McGraw-Hill Book Co., 1971. p. 7.

[2]For two very interesting yet completely different approaches to evaluation, see Ebel, Robert L. "Educational Tests: Valid? Biased? Useful?" *Phi Delta Kappan* 57: 83-88; October 1975; and Marlowe, John. "Testing, Testing . . . Can You Hear Me?" *Phi Delta Kappan* 58: 256-57; November 1976.

With the advent of objective-type examinations, however, masses of data became available for the first time. Researchers took this opportunity to quantify the results in a number of ways, drawing conclusions and inferences, some almost at random. The elementary school was generally the most fertile ground as large numbers of subjects were available for testing and student progress could be monitored over the ensuing years. With such a large number of subjects involved, standardized tests soon evolved. By the early 1920's this form of test found its way into both the secondary schools and the military, where the Army Alpha Group Intelligence Test was used in the placement of World War I recruits. These early standardized tests were attempts to measure not only general intelligence but also personality, aptitude, and in some cases, achievement and predictive success.

A standardized test is one that has evolved from a series of administrations under a wide variety of conditions, each time undergoing rigid statistical treatment and revision processes. Because of the nature of standardization, some test instruments are more sophisticated than others; however, the essential value of such a test is that it tends to measure similar knowledge or information accurately from a wide population.

Teacher-made objective tests were also derived from this early standardized test thrust as more and more instructors sought to determine achievement from within their own courses. Although validity, reliability, and objectivity were less than perfect, the trend to teacher-made objective tests did personalize the testing procedure and enable faculty to make comparisons between classes and levels of achievement within them as well as comparisons of the effectiveness of a year's instruction from one year to another.

Recent developments have included trends toward less formal types of evaluation, including the use of such devices as anecdotal records, personality inventories, case studies, and individual rating or self-assessment scales. As more and more individualization of instruction occurs and as increasing numbers of adults engage in self-study within either a formal or informal setting, self-assessment should grow rapidly and, with it, the demand for instruments of increased validity, reliability, and objectivity.

## A BRIEF HISTORY OF BUSINESS EDUCATION EVALUATION

Evaluation in business education evolved from the early apprenticeship days when assessment in the form of observation occurred as the apprentice moved from rank amateur to accomplished journeyman. Evaluation of the total individual was essential as this type of training also included religious, moral, and ethical instruction in addition to appropriate skill development. One individual, the master craftsman, was responsible for all aspects of training as well as for evaluation. Then, as now, the weight of evaluation was placed largely on the product developed. If the individual performed—that is, accomplished the task assigned—he was judged accordingly.

As the world evolved into a more sophisticated state, apprenticeship training moved from this one-to-one situation and gave way to the itinerant

teacher whose role was to travel from town to town, giving instruction in the art of penmanship, bookkeeping, and other related clerical skills. As the itinerant teacher's income was derived from his students, and since news did travel even in those early days, it was incumbent upon him not only to teach for the trade but also to evaluate adequately and honestly those under his instruction. Since only a few weeks were allotted for each visit, assessment was highly personal and ongoing. However, as economic growth continued and demand for trained workers expanded, the need to develop schools to train larger numbers of employees for clerical and managerial professions became apparent. One of the first of these schools devoted solely to commercial education was Dolber's Commercial College, founded in New York City in 1835. Others followed rapidly in the major urban centers of the day. Evaluation of the product graduated was determined by the wages one could command based upon skills developed in the particular school.

Assessment, however, was still largely informal until the Bryant-Stratton chain of business schools standardized procedures, texts, and evaluation techniques and instruments in the mid-1800's. Students who transferred from one school in the chain to another not only were guaranteed equal tuition but also equivalent placement—an advantage largely unheard of in those days.

When the typewriter became commercially successful and shorthand systems found their way into offices throughout the latter part of the nineteenth century, researchers followed with productivity standards based on output and skill measurement tasks. Syllabic intensity, standard word counts, and measures of production established by the commercial high schools of the early 1900's were based largely upon the demands of local businesses who, in turn, hired the graduates. Soon businesses themselves began testing applicants on skills and, where otherwise qualified applicants were lacking, established internal training programs based on their specific needs. Lucinda Prince, for example, initiated training for department store saleswomen in Boston as early as 1905.

Evaluation activities also flourished outside the traditional school and retail trade setting. Frederick Taylor, the "Father of Scientific Management," utilized testing procedures widely to increase output and to evaluate his employees. The famous Western Electric Hawthorne studies were outgrowths of Taylor's interest in determining specific norms and standards for employees.

Predictive instruments were introduced in the late 1920's with the subject of shorthand prognosis receiving major attention. Tests developed during the decade following have, in fact, largely withstood the test of time and are even today being used in schools throughout the nation.

Finally, as a result of the Vocational Education Act of 1963, the Amendments of 1968, and the 1976 reaffirmation of these earlier legislative actions, evaluation is a specifically mandated activity that must occur for any district utilizing VEA funds. State departments of education are responsible for assessment, but the burden of evaluation falls upon the individual school and its specific business education program. This type of program evalua-

tion, therefore, is a continuous process and involves a scope beyond individual students or classroom achievement. Self-assessment on such a scale cannot help but bring about sweeping changes that will integrate the practices of business with the theory of the educational community.

## CONCEPTS OF EDUCATIONAL EVALUATION

While there are many ways to define "evaluation," three variations are as follows:

1. Evaluation—". . . the process of ascertaining or judging the value or amount of something by careful appraisal."[3]
2. Evaluation—"To evaluate . . . means to appraise, not just to measure. It is the inclusive process of charting and estimating progress toward many goals, some of which are not measurable quantitavely . . . evaluation has qualitative and introspective features. In this process, opportunity is provided for individuals and groups to examine and reflect on their own experiences for whatever meaning they may discover in them."[4]
3. Evaluation—". . . the process of delineating, obtaining, and providing useful information for judging decision alternatives."[5]

The central theme, appraisal, is expressed in the first two definitions and is implied in the third. To measure something against an accepted standard also implies that a decision will be made concerning the findings—if only to make *no* change at all. Decision making is always a complex process, needing information as an automobile needs gasoline. "The provision of information to decision makers has been a central concept in evaluation theory."[6] In order for any teacher, supervisor, administrator, or parent to make decisions concerning any aspect of education, whether it be one of noncertificated employment, supplies for maintenance, or the continuance of the special education program, certain specific elements are involved. These decision-making stages include (1) the awareness that a problem exists and that a decision is necessary, (2) the design of alternative decisions, (3) the selection of the most appropriate alternative, and (4) the action taken to implement the decision. All decisions, therefore, based on the results of evaluation flow along the following channels in the decision-making process:

The Decision-Making Process

1. The Awareness Stage
   a. Routine actions
   b. Emergency actions
   c. Future actions

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[3]Good, Carter V., editor. *Dictionary of Education.* New York: McGraw-Hill Book Co., 1945. p. 156.

[4]Joint Committee on Testing. *Testing, Testing, Testing.* Washington, D.C.: American Association of School Administrators, 1962.

[5]Phi Delta Kappa National Study Committee on Evaluation. *Educational Evaluation & Decision Making.* Itasca, Ill.: F. E. Peacock Publishers, 1971. p. xxv.

[6]Alkin, Marvin C. "Forward." *Evaluation and Decision Making. The Title VII Experience.* CSE Monograph Series in Evaluation. Los Angeles: Center for the Study of Evaluation, University of California, 1974. p. xi.

2. The Design Stage
   a. Statement of the problem
   b. Authority/responsibility
   c. Alternatives formulated
   d. Criteria for selection
   e. Timing established
3. The Selection Stage
   a. Match alternative to criteria
   b. Determine possible outcomes
   c. Select alternative
4. The Action Stage
   a. Determine responsibility
   b. Implement decision
   c. Evaluate results

*Awareness stage.* Becoming aware that a problem exists may end solely with that awareness, as many problems stand for years with no pressing need for their solution. However, in educational terms, awareness of a problem almost always prompts the need for a decision. The awareness may emanate from any number of sources, but the fact that it exists urges action. Highly recommended, yet just as highly unlikely, is a monitoring procedure that provides for ongoing, systematic reviews that signal events *prior* to their becoming critical. Decisions made in haste are often repented at leisure. The awareness stage is made up of at least three elements—routine actions, emergency actions, and future actions.

Routine actions are those planned activities that take place periodically, such as the opening and closing of the academic year, grading periods, and office equipment maintenance contracts. Routine actions can be planned for and programmed into a schedule and are, therefore, among the easiest decisions to make.

Emergency actions involve those for which no plans exist. Contingency plans may be made for fire drills, equipment malfunctions, interruptions of service, and related problems; but not all activities may fall under these situations. Evaluation of an ongoing nature can spot trouble before it flairs up into a full-fledged problem.

Future actions may also provide opportunities for related activities. Membership on a local business advisory board, opening the school to community activities, and keeping abreast of business research trends and technology are elements where early awareness may prompt associated opportunities. Prizes offered for funding suggestions encourage the consideration of new avenues of exploration.

*Design stage.* In general, decision-making authorities include five elements within this area: the problem defined, the authority/responsibility assigned, alternatives formulated, criteria for selection provided, and timing established.

The problem should be defined clearly and in question form if possible as this format forces the decision maker to consider the problem as one with an answer rather than as a simple statement with some vague implications. Preciseness and clarity are watchwords in satisfying this element.



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The authority/responsibility assigned must also be carefully considered. Who is assigned to make a decision or to carry it out? Is adequate data available to this individual? Does the individual have the capabilities of making the decision based on ability, experience, and sophistication? Does the individual have the appropriate authority to carry out a decision finally made?

The formulation of alternative decisions is a critical step in the decision-making process. Obviously, time and other resources are not inexhaustable quantities; therefore, programs should be considered that allow for as much input as possible. Teams may be drawn together to arrive at alternatives, potential solutions may be tested against each other by soliciting opinions from unbiased individuals or groups, and brainstorming tactics may be utilized. Each of the foregoing, unfortunately, is subject to the same constraints of time and resources. However, only from the development of alternative solutions to the problem can the one best solution be selected. Selecting from a number of viable alternatives is better than being restricted to only one solution.

The criteria for selection should be established following the generation of alternatives because an earlier-formed structure may hinder the free flow of ideas desired at that point. The criteria should be as specific as possible. Use of taxonomies prepared by Bloom and others and Krathwohl and others will result in specific behaviorial objectives for cognitive and affective domains and also allow for specificity in dealing with alternative choices. The criteria will ensure that superficial objectives are avoided.

The final step is to establish the timing for implementation of the decision. Scenarios developed for military operations and police activities provide alternatives and timing routines; educational decision making can make good use of these processes. When to implement a decision may be as important as the decision itself. Aids such as Program Evaluation Review Techniques (PERT) charts, planning boards, and flowchart matrices all help in arriving at a time-flow decision.

*Selection stage.* Three elements are essential in this stage of decision making. They include matching the alternatives to the criteria established, the determination of possible outcomes from each possible alternative, and finally, selecting the alternative to be implemented.

The matching procedure is largely mechanical insofar as each alternative generated in the previous stage is matched against the criteria developed in the same stage. If the alternative decision does not match, it is rejected. For example, if only a limited maintenance budget is available, it would be inappropriate to consider a more expensive plan, regardless of the advantages involved. When nondiscrete terms exist, which should be avoided, judgment must be exercised whether to reject or retain the alternative. An example is cost. The criteria may state that cost should be minimal (in itself a poor choice of terms), yet the alternative may involve a cost factor of $1,000. Judgment of "minimal," therefore, is left to the decision maker. Remaining alternatives from this process are then subjected to potential outcomes. The game of "what if" is played and extended as far as possible. Additional

members of the decision-making team or staff aides should be involved in order to provide the greatest breadth possible, and the implications of each action should be carefully analyzed by all, as apparently simple decisions often have far-reaching implications.

Finally, after considering all alternatives, matching each with established criteria and predicting potential outcomes, a decision may be made, selecting the one best alternative remaining. If no alternative remains after the matching activity, recycling to the design stage must be done.

*Action stage.* When a decision has been considered, confirmed against the preceding criteria, and finalized, only implementation remains. This action stage has three elements: determine responsibility, implement the decision, and evaluate the results.

Once the decision has been made, it must be determined who will implement it. The appropriate individual or office to carry out the actual decision should be carefully considered. With one responsible individual in charge of the decision, feedback from those affected is both direct and appropriate. The individual closest to the decision itself should pay close attention to the outcome when the decision is implemented; for example, the installation of new typewriters should be supervised by the head typing teacher. This action, obviously, should also involve budgetary, personnel, and facilities considerations.

Finally, no decision is complete until an evaluation of its effects is made. This evaluation may be ongoing or terminal, formal or informal, depending upon the nature of the process itself. Evaluation is never one way; proper execution of a decision and its effects demands communication between those affecting and those affected. Elimination of feedback evaluation runs the very real risk of imposing decisions upon those unwilling or unable to abide by them.

In order to establish a rationale for educational evaluation and to make the evaluation as effective as possible, basic concepts or premises must be thoughtfully considered and carefully established. A broad treatment of these evaluative concepts, developed by Shack,[7] has been editorially modified as follows:

1. Philosophy and objectives must be defined.
2. Staff support and expertise at each level of evaluation must be acquired.
3. Standards of the discipline evaluated must be established.
4. Specific criteria for assessment must be determined.
5. Evaluative instruments must be developed and validated.
6. Related ancillary services must be included.
7. Evaluation must be relevant to the philosophy and objectives established.
8. Reporting methods must be developed.

Although each of the foregoing elements leads to a total conceptualization of educational evaluation, its rationale and framework, a more func-

[7]Shack, Chrystine R. "The Conceptual Framework for the Evaluative Process." *Criteria for Evaluating Business and Office Education.* Seventh Yearbook. Washington, D.C.: National Business Education Association, 1969. Chapter 4, p. 34.

tional, directive approach can be drawn from the evaluative instrument itself. In addition to providing a framework for use within any discipline, Hardaway maintains that in business education six major functional elements may be derived from any evaluative instrument.[8] Each of these elements can be beneficial in and of itself; however, all elements combined serve the total purpose of evaluation in a classroom setting. These six elements are:

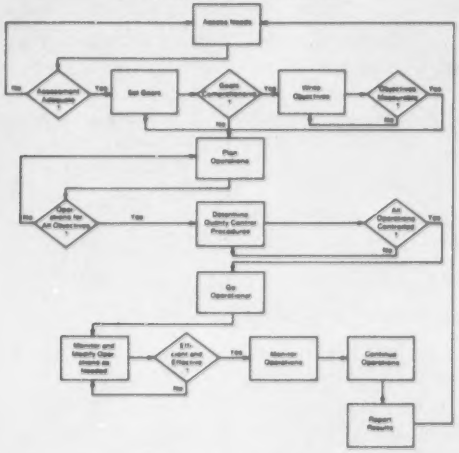
1. A student evaluation device
2. A teaching device
3. A guidance device
4. A teaching evaluation device
5. A research device
6. A curriculum improvement device.

Therefore, concepts of educational evaluation include a lengthy process of thoughtful consideration and extensive planning prior to any attempt to put theory into practice. The next stage in the process of educational evaluation is the consideration of the appropriate method of implementation.

## METHODS OF EDUCATIONAL EVALUATION

While Shack's conceptual framework and Hardaway's functional elements focus on two separate aspects of evaluation, the broad and the specific, the actual *method* of evaluation appears open to investigation. The flowchart developed by Gottman and Clasen, shown in Figure I, provides an overview of the locus of control needed in every project where evaluation is involved.[9]

FIGURE I. Locus of Control




[8]Hardaway, Mathilde. *Testing and Evaluation in Business Education.* Cincinnati: South-Western Publishing Co., 1966. p. 13.

[9]Gottman, John M., and Clasen, Robert E. *Evaluation in Education: A Practitioner's Guide.* Itasca, Ill.: F. E. Peacock Publishers, 1972. p. 217.

Guidelines for the design of evaluation proposals may differ from authority to authority; indeed, one has been previously considered. Five basic points generally agreed upon as essential to each program are: (1) rationale for evaluation, (2) objectives of the study, (3) description of the program, (4) design of the evaluation, and (5) reporting considerations.

*Rationale for evaluation.* Justification for the evaluation is needed. It may involve detailed research resulting in a decision to postpone or avoid entirely the evaluation under consideration. The rationale should include the authority under which the evaluation is to be conducted and the general scope and parameters of the evaluation.

*Objectives of the study.* Without specific objectives, there can be no direction or focus except by accident. Questions to be answered include the nature of the evaluation product, the audience to be served by the product, and the criteria under which the study is to be conducted. A follow-up study of business graduates is an excellent example that provides for such specific objectives.

*Description of the program.* A thorough description of the program to be evaluated should be developed and questions answered relating to program philosophy, scope, and content; objectives—both implied and explicit; program procedures and the community served—both internal and external.

*Design of the evaluation.* As in most research designs, guidelines established should include problems formulated and questions posed, terms defined, data deemed necessary to answer the questions, the method of gathering the data, the treatment of the data, reporting procedures, and estimated budget needed.

Evaluative designs of this nature in business education are generally divided into two basic categories: experimental and descriptive. The experimental design involves testing the presence of one or more variables—usually dealing with groups of individuals. Comparing two methods of teaching accounting is an illustration. The descriptive design involves the observation and recording of ongoing activities, for instance, a survey of business equipment. These designs, however simplistic, always involve a number of variables. When dealing with a single teacher competency, for example, Tikunoff and Ward have listed context variables that include the following possibilities:

1. Student population variables—grade level, age level, quantity.
2. Curriculum variables—content/subject area, imposed or teacher-originated, support from parents and/or administration.
3. Instructional materials variables—match between materials and curriculum objectives, whose materials/publishers or teacher, who selected, sufficient in quantity, level appropriate, liked or imposed.
4. Classroom setting variables—comfort, places to sit, space, bookshelves, boards, teachers or aides.
5. Organization for instruction variables—consistent with curricular goals, groups provided, independent work, where, when, how.

6. Allocation and utilization of time variables—time allocated for teaching, how much in relation to other activities, how time spent, tasks involved, who involved.
7. Distractions from instruction opportunity variables—all students present, transfers into class, interruptions such as fire drills, noise levels, tolerance for distractions.
8. Teacher variables—security in teacher, favorite subject, length of time in subject, background, alone in class or team member, style most comfortable with, philosophy and concerns about teaching, physical condition, mental health, like school/faculty/administration, security with job, home, family, etc.[10]

Of course, sample designs involving additional variables to those above may be found in any basic educational research textbook.

*Reporting considerations.* A determination of how the results are to be communicated should also be included in the proposal in addition to recommendations and any conscious biases of the evaluator experienced. The following is a sample format for a final evaluation report.

Section I. Objectives of the Evaluation
- A. Audiences to be served by the evaluation
- B. Decisions about the program, anticipated
- C. Rationale, bias of evaluators

Section II. Specification of the Program
- A. Educational philosophy behind the program
- B. Subject matter
- C. Learning objectives, staff aims
- D. Instructional procedures, tactics, media
- E. Students
- F. Instructional and community setting
- G. Standards, bases for judging quality

Section III. Program Outcomes
- A. Opportunities, experiences provided
- B. Student gains and losses
- C. Side effects and bonuses
- D. Costs of all kinds

Section IV. Relationships and Indicators
- A. Congruences, real and intended
- B. Contingencies, causes and effects
- C. Trend lines, indicators, comparisons

Section V. Judgments of Worth
- A. Value of outcomes
- B. Relevance of objectives to needs
- C. Usefulness of evaluation information gathered[11]

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[10]Tikunoff, William J., and Ward, Beatrice A. "Specifying Ways and Means of Insuring Reliability and Validity in Competency Assessment." Paper presented to the Conference on CBTE in Special Education: Competency Assessment; sponsored by the University of the State of New York and the State Education Department Office for the Education of Children with Handicapping Conditions, Plattsburgh, N.Y., August 12, 1976. San Francisco: Far West Laboratory for Educational Research and Development. pp. 1-2. (Mimeo.)

[11]Worthen, Blaine R., and Sanders, James R. *Educational Evaluation: Theory and Practice.* Worthington, Ohio: Charles A. Jones Publishing Co., 1973. p. 304.

The foregoing outline illustrates a sample format for a final evaluation report, but it may not be appropriate for all projects. Costs, one of the major elements of the report, may be treated in a more extensive manner as this element, unfortunately, exerts an extremely restrictive role in the evaluation process.

## COSTS OF EVALUATION

Evaluation costs may include those monetary expenses involved with the actual materials and procedures of the process as well as those external nonmonetary items such as social or psychological costs. Only monetary expenses will be considered at this time. As in any decision involving expense, a cost-benefit analysis should be made. This analysis weighs the actual expense of the evaluation program against the outcomes derived. Even results that may favor the evaluation decision may still be insufficient to compensate for the anticipated expenses. Strict accounting methods, providing for recording and analytical functions, are often inadequate in measuring human outcomes. Thus, standardized cost procedures cannot be established with any degree of validity as every evaluation program differs in some respects. General guidelines, however, can be provided along with suggested procedures for their implementation. Several considerations for educational evaluation cost analyses and a number of procedures for conducting such analyses have been postulated. Cost variables include, but are not limited to, the following:

1. Numbers of students involved
2. Number, type, and quantity of instruments used
3. Scoring techniques involved
4. Time factors—both in evaluation and in time away from routinely scheduled classes and activities
5. Equipment necessary.[12]

These items may be generally quantified, reduced to numeric equivalents, and subjected to computer analysis. The results of this analysis will yield objective data upon which some decisions may be made. However, some caveats may also exist and include the following:

1. Planning of evaluation is as essential as the evaluation itself. Reasons for gathering the data must be established and cost benefits derived that support the decision to move into evaluation. Planning must involve others, and as always, group consensus is both important and necessary.
2. Alternatives are an essential outcome of planning. Several routes that culminate in the desired objectives must be provided and activities to arrive at each goal clearly established.
3. Resources must be allocated in terms of time, space, supplies, and equipment. The parameter of each should be established, with time frames an essential ingredient.

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[12]Popham, W. James, editor. *Evaluation in Education.* Berkeley: McCutchan Publishing Corp., 1974. pp. 447-49.

4. Only costs relevant to the final decision should be included. Although time constraints and flexibility considerations may affect costs, they should be included insofar as possible.
5. Cost measurement units should be based on a known, easily understandable, quantifiable basis. Cost per student hour of instruction, cost per student per overhead hour (external costs), and cost per student instrument (with or without scoring) are all illustrations of quantifiable data. Salaries, fringe benefits, square footage, equipment, and supplies are those most easily gathered and tabulated.
6. Absolute accuracy is impossible for any decision based on future projections; therefore, relative cost estimates should be an objective.
7. Alternatives must also be considered in a cost analysis. As each alternative is developed, cost factors should be included in order that comparisons can be made not only for the alternative and its outcome but as to the cost of arriving at such an outcome.

Cost factors, therefore, regardless of the nature of the project being evaluated, must be considered in terms encompassing both quantitative and qualitative measures. Although physical costs are easier to determine, human costs are more essential. The primary goal of evaluation should be to improve instruction. Cost factors are essential ingredients in this recipe.

## RECOMMENDATIONS FOR EDUCATIONAL EVALUATION

With the rapid growth of competency-based, performance-oriented, and behaviorally conceptualized programs at every level of educational endeavor, accountability appears to be the watchword for the evaluation of educational programs. These programs affect competencies that "simply cannot be measured in traditional ways or with traditional tests. Furthermore, since the competency-based approach to education makes the demonstration of competence the *sine qua non* . . . the measurement of attained competence has become the single most important problem in the effective implementation of these programs."[13] As such, measures of accountability, ranging from student achievement in terms of criterion-referenced tasks through teacher preparation and performance (both pre- and in-service activities) to local, regional, and national assessment programs, loom ever higher on the evaluative horizon.

However urgent the implementation of these measures are, another problem exists; this problem is the *training* of effective evaluators in the preparation, administration, and analysis of valid instruments by which to measure factors of accountability. Much criticism, largely justified, has been leveled against evaluation findings and recommendations that do not take into account the different aspects of individual student and teacher differences, community standards and goals, and existing instructional materials available. Most of this justifiable criticism is due to the lack of appropriate descriptors by which observations and outcomes can be identified and

[13] Pottinger, Paul, and Klemp, George. "Introduction." *Final Report to the Fund for the Improvement of Postsecondary Education.* OEC-O-74-9250. Boston: Institute of Competence Assessment, October 1975. p. 1. (Mimeo.)

compared. Attempts to isolate descriptors has evolved from the general contributions of the National Assessment Program and specific attempts made by business education through NOBELS and later projects of this type.

Another critical need in educational evaluation encompasses the entire spectrum of evaluation *research* as applied to alternative methods of evaluation, goal-setting activities and the measurement of attainment, and appropriate *valid* instruments. As yet there are few, if any, effective approaches to educational evaluation. One generally tends to adapt and use whatever methods or techniques that were used earlier, perhaps under very different circumstances. This historical approach may, by accident, provide some valid data upon which decisions are made, but accidental measures more often generate accidental data. The term that computer programmers use, GIGO—garbage in, garbage out, applies equally well to assessment procedures. Models need to be developed and validated in order to fit the basic elements upon which supportable decisions may be made. Computer-based models, expensive but effective, provide a primary base for analysis of the thousands of interactions and variables involved in accountability analysis. Standard statistical tools simply cannot cope with either the magnitude or the scope of assessments beyond the most basic ones.

Another critical need involves the *practice* of evaluation. Too often evaluation is considered only at the terminal stages of a program assessment. Evaluation must be included at the *planning stage* of a project—not initially at the midpoint or final phase. In addition, the pressures exerted upon evaluators for early and, therefore, hasty judgments must be lessened. Long-term decisions demand considerable contemplation; anything less subverts the procedures and injects another variable, one that cannot possibly be controlled. These decisions, once rationally and thoughtfully made, must also take into account the *total* audience affected by them. In the past, decisions often have been made with only the specific school plant in mind, completely isolating it from the district, the community, or the region involved. Finally, evaluation decisions must be made from a more *pragmatic* and *practical* viewpoint. Recommendations that ignore political, financial, and physical reality may be theoretically sound but lacking in practical feasibility; such assessments, thus, should provide for practical alternatives for implementation.

Finally, evaluation should be conducted by *trained* personnel. Practical considerations may demand the use of existing program personnel who have adequate quantitative skills or research design backgrounds as is often the case; however, these assets notwithstanding, this tends to blur issues as the inherent confusion between research and evaluation generally proves to be an insurmountable problem. Retraining of personnel from within, however necessary to the program evaluation itself, is generally a practical impossibility calling for such a long-range program as to be almost self-defeating in nature. Outside expertise is often the accepted solution; however, consultants, while providing objectivity, generally lack community involvement and personal interaction.

Thus, it appears clear that with the greater use of standardized criterion-referenced materials, the expansion of electronic data processing devices, and the selection and training of *evaluators* as opposed to researchers, educational assessment will soon become even more widespread. Competency-based curriculums and performance-based teacher education requirements are but two mandated elements lending support to this contention.

Educational evaluation, though not providing a panacea for all educational ills, offers the potential of prescribing a more sophisticated treatment rather than the home remedies currently being practiced. Business education has historically been deeply involved in ongoing self-evaluation activities; it now has the opportunity to provide experienced leadership in a total assessment program and should prepare itself accordingly.

CHAPTER 9

# Strategies for Evaluating Students

**ROBERT S. DRISKA**
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A funny thing happened to me on the way to the classroom. As I rounded a corner in the hall, Educator approached me and said,

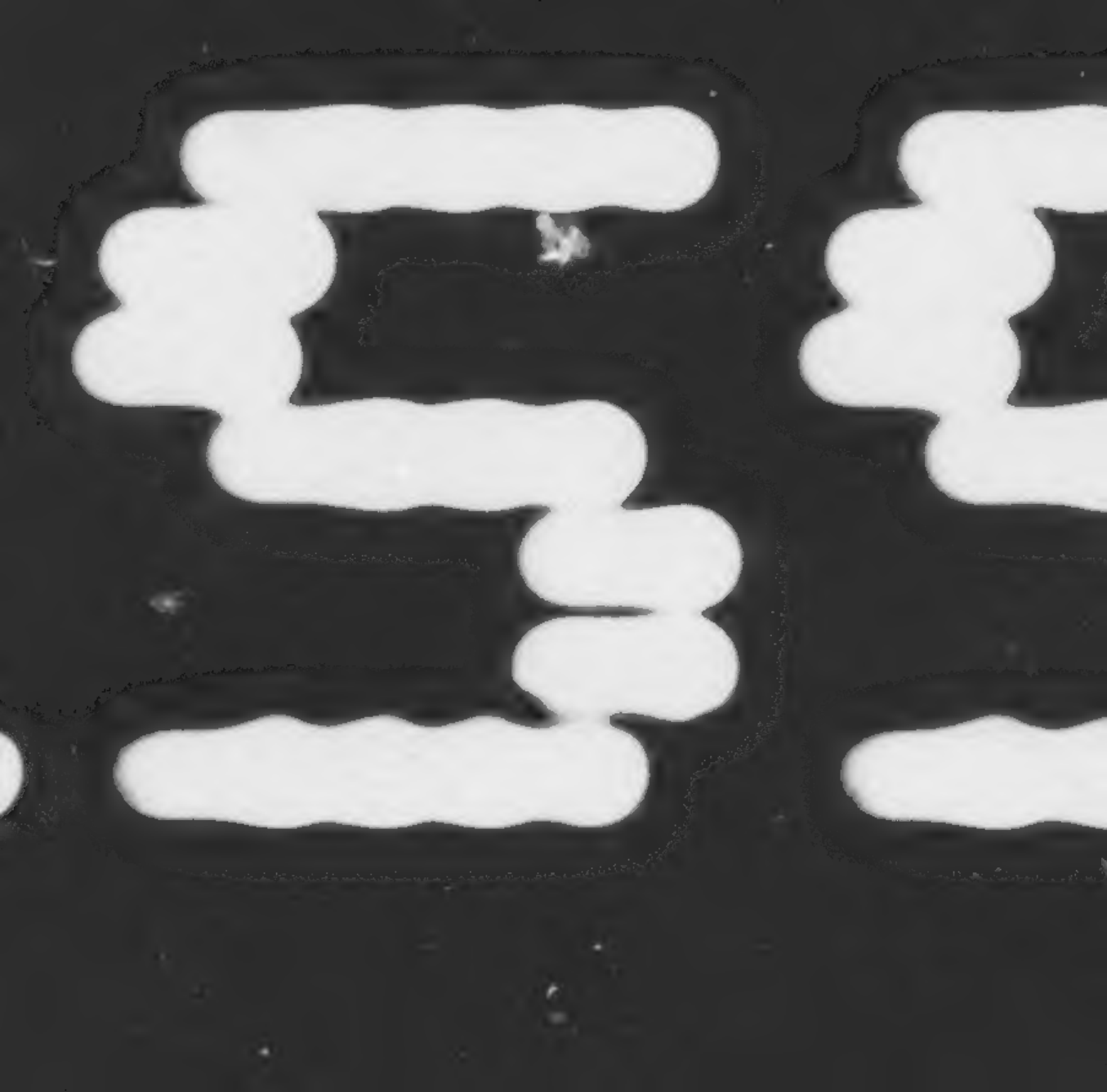
"Goest thou to teach?"
"Ah, truly," said I.
"Knowest thou the outcome of thine instruction?"
"My goals are clearly perceived."
"And behaviorally stated?" said he.
"And behaviorally stated," said I.
"May thine instruction bring forth the expected learning outcomes."

And on another day not long thereafter, burdened with lengthy examinations for the accounting of my students, I confronted Assessor. He spoke:

"Goest thou to test?"
"Ah, truly," said I.
"And wilt thou measure learning outcomes?"
"Indeed, and a proper sampling of them sir!"
"May thine examinations objectively assess."
But as he turned to go, Evaluator appeared.
"Goest thou to evaluate?"
"It seemeth so," said I.
"Knowest thou the outcome of thine evaluation?"
"Outcome, sir? Meanest thou the scores my students will receive?"
"Nay, but the use to which these scores shall be put. For with them thou will surely make judgments and decisions grave."

So new to me was this line of questioning, I began to tremble. For tests are to give, and to score, and to neatly record. But to make grave decisions . . . ? And even if it were so, to know *in advance* what decisions I might make? Truly, Evaluator is a troublemaker . . . "Knowest thou the outcome of thine evaluation?" How absurd.

And yet, it is not absurd at all to wish to know, *before* you begin a task, what you ultimately hope to accomplish. Nor is it absurd to specify, before you set out to obtain information, how you plan to use it. Certain kinds of decisions require certain kinds of judgments. And the kind of information that is useful for one type of judgment may be useless for another. Furthermore, the nature of the judgments and decisions one hopes to make determines when and under what conditions the information is obtained.



The dilemma of evaluation and formulation of objectives will be discussed in the first part of this chapter. Specific methods or strategies for evaluating students will be discussed in the longer, second section. These strategies include the following: the use of teacher-prepared tests including the preparation, interpretation, and follow-up of such tests; published tests; informal evaluation; the evaluation of attitudes and personal traits; and self-evaluation. The final part of this chapter will explore the question whether students should ever fail and the use of competency-based techniques in evaluating students.

## THE DILEMMA OF EVALUATION

Evaluation is inevitable, exasperating, and extremely humbling. Nearly every teacher has, at some time or another, experienced a painful twinge of guilt as he sneaked into his classroom clutching a test made in haste the night before. Many teachers have been bewildered by the maze of percentile ranks, stanines, T scores, and Z scores they find carefully recorded in students' files. And what teacher, sitting down to make out grade reports, has not cried out for an escape from the seasonal task of playing God? What strategies should he use?

Probably two factors explain why evaluation, which is so completely a part of any teacher's daily life, is so frustrating and exasperating. First, the teacher finds himself in the middle of an intellectual tug-of-war. And second, the existing evaluation programs in most schools require the teacher to play a role that he either does not understand or cannot accept.

If we listen to teachers for 10 minutes, we will hear more complaints about evaluation than any other aspect of education. When teachers discover themselves spending hours gathering data for the purpose of marking and grading and additional hours recording the data, frustration results. The day-by-day evaluation and measurement activities required of teachers cannot help but cause consternation. Teachers are required to sit in judgment on others, even though they realize that their knowledge about their students is fragmentary—probably a close approximation at its best and downright nonsense at its worst. Teachers recognize the potential inaccuracies and frailties of grades, and yet they find too many administrators, parents, and students accepting grades as gospel. Testing programs and courses of study require them to do things *to* students, yet teachers are supposed to teach in such a way that students will have the necessary knowledge and business skills as well as become self-realizing, self-actualizing individuals.

## FORMULATION OF OBJECTIVES

In establishing criteria and objectives for a course, the teacher should ask himself this question: "What skills, knowledges, abilities, habits, and attitudes do I expect my students to have as a result of my teaching them?"

Objectives may be defined in terms of behavior patterns which evi-

dence certain skills, abilities, habits, attitudes, and understandings desired. Emphasis is placed on what the student *does* do, not what he can do.

The teacher evaluates the students' educational experiences in terms of the progress made in achieving accepted objectives. The following three categories of educational objectives are particularly useful for business teachers: cognitive, affective, and psychomotor skills.

Under the heading of cognitive objectives are included such items as simple knowledge of facts, understandings, comprehension, ability to apply principles, ability to analyze, ability to synthesize, and the ability to evaluate the overall worth of a communication or experience. Although these cognitive objectives might seem more appropriate to the general and social business courses, the basic abilities involved in these objectives would apply to all business courses including such skills subjects as typewriting and shorthand.

Affective objectives commonly involve the use of such words as appreciation, attitude, value, belief, and others involving an emotional element. Appreciation for the American business system or for an attractively typed letter, a good business attitude, and concern for co-workers are common examples of objectives for business courses in the affective domain. Another related affective objective for any business course is the development of good work habits, such as following directions intelligently; working independently and without waste of time; listening attentively and observing critically; selecting and using books, equipment, and other materials wisely; and knowing how to seek help.

In the case of psychomotor skills, definition of objectives in terms of behavior is relatively easy. If, for example, a definite copy rate is established as an objective of the typewriting course, success in meeting this objective may be easily defined and evaluated in terms of the rapidity and accuracy of the writing. Objectives in the category of psychomotor skills are frequently stated in terms of quantities attained or accomplished in a certain period of time. Examples include the number of words typed per minute, the ability to take dictation at a certain rate per minute, and the transcription of a number of mailable letters in a specified period of time. All of the business skills subjects—typewriting, shorthand, office machines, and others—have objectives stated in the terminology of psychomotor skills.

To be effective as a basis for measuring student growth, objectives must be definite, comprehensive, and clearly defined; and they must be developed cooperately by those whose needs and standards must be considered—students, teachers, school administrators, parents, and businessman. Moreover, objectives should be determined for intermediate stages of the entire learning period as well as for the final accomplishment.

## TEACHER-CONSTRUCTED TESTS

After the objectives for each course have been carefully formulated, the teacher must plan a strategy for measuring those objectives. The most common strategy used is the teacher-constructed test.

One essential of the measurement process is that there be a number of well-defined test situations to which the students whose behavior is being measured can be expected to respond. The situations might take a variety of forms. They might be test questions of the usual sort: essay questions, short-answer questions, true-false questions, multiple choice questions, and the like. The testing situations might involve machines—typewriters, transcribers, calculating and adding machines, duplicating equipment, or data processing machines—which the student is supposed to manipulate in one way or another. The testing situations might be presented through all kinds of media: the printed page, films, filmstrips, tape recorders, oral instructions, physical gestures, or any combination of these. The testing situation might seek to elicit any kind of behavior of concern to the teacher: verbal, nonverbal, cognitive, affective, or manipulative. The universe of test situations is very broad; it includes the questions in paper and pencil tests, but it is not limited to these; it extends to practically any combination of stimulus materials the teacher is able to devise for the purpose of obtaining observable reactions in students.

Furthermore, even within a particularly narrowly defined field—typewriting, for instance—the variety of test situations needed to encompass *all* the learning that takes place may be surprisingly extensive. These are some of the learnings that the typewriting instructor *hopes* will take place: typing from copy with increased speed, typing from copy with increased accuracy, typing from dictation with increased accuracy, knowledge of the rules of hyphenation, knowledge of proofreading marks, and so on.

Testing has been the most common and traditional procedure for determining to what extent the teacher's responsibility for evaluating students has been fulfilled. Testing serves several purposes: to determine what progress is being made; to discover weaknesses; to seek opportunities for improvement of methods, procedures, and content; and to check end-of-course status.

*Preparation of tests.* According to Hanna, an examination is more than a fortuitous grouping of individual test items—regardless of how excellent each of these may be.[1] A test must be viewed as a whole, and it must be judged in its extrinsic as well as its intrinsic relationships. A test can have validity only as a measurement of something specific; it must be appropriate to a particular situation; it must be suited for an identifiable group of students taking the test. The designing and building of a satisfactory examination, therefore, requires serious thought, extensive planning, and careful execution.

Satlow offers the following suggestions in preparation for testing:

1. In the overall planning for the course, set aside a certain number of class periods for testing.
2. Be sure that the total evaluation program reflects the various objectives of the course.
3. Determine the purpose each examination is to serve before preparing it.

[1]Hanna, Paul L. "Planning, Assembling, and Administering the Objective Test." *Evaluation in Social Studies.* Thirty-Fifth Yearbook. Washington, D.C.: National Council for the Social Studies, 1965. Chapter 9, p. 174.

4. Think of the type of student for whom the test is being prepared.
5. Before writing the test, determine the amount of time you can afford to devote to it.
6. Before actually writing any of the test questions, plan carefully the scope and content of the test.[2]

Many writers offer specific suggestions for the actual writing of the test. The partial listing by Satlow of do's and don'ts for test writing is particularly appropriate for the business teacher. Some of his suggestions include the following:

1. Use a specification sheet that enumerates various items that should have been mastered by students as your source for question materials.
2. Make certain that the test items are representative of the significant work of the unit or grade.
3. Let the weight given to the various items reflect the importance of the items.
4. Make each test as brief as possible.
5. Arrange the questions along diagnostic lines.
6. Use various question types; make use of the performance-type test as well as the theory type.
7. Phrase your questions in a manner that calls for thought rather than a mere recital of facts.
8. Arrange the questions in an appealing manner.
9. Make the questions specific rather than general.
10. Inject variety into the testing program.
11. Use simple but correct English that is on the students' level.
12. Have all directions stated briefly but clearly on the paper.
13. If possible, provide a sample answer with each question type.
14. Have test items independent of each other.
15. Give recognition to student abilities when writing the test.
16. Adhere to a proper format.[3]

*Interpretation of tests.* After a test has been administered and scored, the information for analysis as a whole and item by item is available to evaluate the effectiveness of the test and of the students' responses. The raw test scores may be compared with those earned by other members of the class, with norms established by previous administrations of the same test, or with an absolute standard of performance.

In the interpretation of test scores, the teacher might use certain statistical techniques. One of the simplest statistical techniques is the conversion of raw scores into a percent of the total possible score. Another often used procedure is the computation of various averages—mean, median, and mode. Such statistical techniques as the standard deviation and the quartile deviation are utilized by other business teachers in the interpretation of tests.

Rather than use statistical techniques, many teachers consider the fundamental operation to be employed in evaluating students with respect to a test situation is determining how the response of Student A exceeds that of Student B in some specified way. That is, the teacher compares the test papers, or usually several test papers, to reach a decision that one exhibits

[2]Satlow, I. David. "Do's and Don'ts of Evaluation." *Journal of Business Education* 42:274-75; April 1967.

[3]*Ibid.*, 275-76.

more of a given quality than the other; e.g., A compared with B, is more nearly correct, more relevant, more logical, more comprehensible, more knowledgeable. Or, A writes with more words per minute, or fewer errors, than does B. The decision depends inevitably on what the teacher sees in the responses before him, or his background, or his habits of perception, or his frame of reference. Thus, in the final analysis, the root of all educational measurement is in a subjective judgment.

*Follow-up of testing.* After the grading and interpretation have been completed, one further step remains—follow-up. From the results of a test, a great deal may be learned about the group tested as well as the test itself. An analysis of the answers to the questions in the test may help determine those areas in which instruction has been effective and those in which it has not. Also in examining the objectives and the standards for each question in relation to students' responses, the teacher might be able to identify certain sources of students' deficiencies. For example, an analysis of the papers might show that students have a grasp of the facts but do not perceive the significant relationships among them. It might indicate that students are able to generalize but are unable to support generalizations with data. Or, the analysis might indicate the need for a particular kind of drill, such as a drill to eliminate flying capitals in typewriting. These kinds of diagnosis are the most useful for the class as a whole and for individual students. This analysis of a student's paper can often serve as a useful point of departure for teacher-student conferences.

## PUBLISHED TESTS

Published test materials are available for testing some aspects of student achievement in business subjects. Perhaps the skill subjects are most satisfactorily measured by tests developed and standardized for nationwide use.

Since teachers are busy and have large classes, it is often easier to use the test that accompanies a textbook than to prepare one. Generally, these tests are well developed and easy to check and score. Many published tests, especially in the areas of bookkeeping and general business, are very comprehensive. These tests are often furnished by the publishers of the textbook free to teachers who are using the text. The questions in the test are correlated so that teachers can compare their students' achievement against norms.

The teacher selecting a published test is usually faced with the problem of selecting the one that comes closest to meeting his/her teaching and testing objectives. In interpreting results from a test so selected, the teacher should keep in mind the extent to which these objectives differ from those stated or implied by the test author. It may be that no published test will adequately meet the individual teacher's purposes.

In examining available tests for possible use, the teacher should give consideration to (1) such practical matters as publication date, cost, and the time needed for administration; and (2) such technical matters as reliability, validity, norms, and test difficulty. Test manuals should provide informa-

tion on both points, although statements concerning reliability, validity, and norms may be less than adequate. Equally important is for the teacher to study carefully each of the tests under consideration, the quality of items, and what the test seems to cover in terms of content, skills, and understandings. Such subjective analysis is of utmost importance to insure that the test selected meets the purpose for which it is to be used.

Other organizations that have published tests of interest to business educators include the National Business Education Association, the Administrative Management Society, and state civil service agencies. The National Business Entrance Tests, published by the National Business Education Association, are among the most used and most effective tests in business education.

## INFORMAL EVALUATION

According to Brady, teachers should begin to employ modes of evaluation alternative to testing for three reasons: (1) serious and imaginative attempts to assess goals now not adequately evaluated can turn attention to neglected but important areas of instruction; (2) alternative modes can be developed which are more intimately related to on-going instruction, and these serve the needs of teachers for realistic assessments of particular classes and particular students; and (3) alternative modes that incorporate the learner's awareness of his own performance can foster self-evaluation.[4]

Observation of students often supplements the evaluation process by producing evidence that can be studied and analyzed by teachers in evaluating the growth of students. Observation is especially helpful in determining students' progress in those aspects of business education that do not lend themselves to formal testing.

By observing students, it is possible to draw some conclusions about their knowledge of important facts and information. Although testing does yield data about this phase of student learning, the teacher can learn even more about students' use of information through observing them at work. Large and small group discussions are fruitful sources of such data: the sources of the student's information, the extent and quality of the information contributed, the ability to relate facts to facts, and accuracy in relating what has been learned to the topic can all be observed and noted.

Special reports given by groups and individual students offer another opportunity for the teacher to observe students' knowledge and information. The teacher can gauge the extent of a student's search for facts and the effectiveness of organization in the facts presented to the class. The teacher can also evaluate the student's concern for accuracy. A study of the sources students use for gathering information shed light on the quality of their reports. Do students summarize information from several reliable sources or depend upon only one? Do they question the accuracy of the information used? Do they support their ideas with well-founded facts? Do they go beyond the textbook in their search for facts?

[4]Brady, Elizabeth. "To Test or Not To Test." *American Education* 1:8; Winter 1977.

The skills subjects in business education offer many opportunities for the teacher to observe student progress. Does the student always use the correct finger for the margin release and tabulator keys? The correct technique in setting up a table? The correct technique in turning the pages of the shorthand notebook during dictation? Are corrections at the typewriter neat and made in a quick and efficient way? Is the work station well organized? These and many other important aspects of the skills courses lend themselves to informal evaluation by observation rather than formal testing procedures.

Student projects such as notebooks, special reports, units and practice sets in bookkeeping are particularly useful in informal evaluation as well as for formal grading purposes. The extensiveness of the report, the neatness of the practice set, the originality of a poster or report should enter into the evaluation as well as the correctness of the information of the subject matter.

Many desirable work habits, attitudes, interests, and personality traits are frequently measured by observation or other informal evaluating techniques. These work habits, attitudes, interests, and personality traits will be discussed in more detail in the next section of this chapter.

## EVALUATION OF ATTITUDES AND PERSONAL TRAITS

Teachers should plan strategies to help students develop those desirable attitudes and personal traits that will assist them in present and future business and social activities. Character, personality, and social responsibility are involved in the development of desirable attitudes, appreciations, and personal qualities. Student growth in these areas is shown by willingness to learn; to cooperate and maintain friendly relations with others; to make a sincere attempt to be accurate and neat; to show initiative; to put forth every effort to be dependable and punctual in meeting responsibilities; to do a little more than is required; to present a good appearance including dress, manner, speech, and neatness; and to meet situations with good social grace, courtesy, and emotional poise.

A constructive attitude towards work and co-workers often is of much greater value to the student than a high degree of typewriting or shorthand skill, although the skill is necessary, too. Such attitudes can be taught by (1) pointing out to students the desirable attitudes to be acquired and the evidence of those attitudes, (2) setting good examples of the attitudes to be acquired, (3) talking privately to students who seem to need help in the area, and (4) attempting to evaluate achievement in acquiring the right attitudes and personal traits.

Daily observation of students—and observation particularly of the reactions they arouse in others—is one method of evaluating attitudes. An example of attitudes to be evaluated in a typewriting course might include the following: (1) a cooperative attitude in promoting the general welfare of the class through good work habits, careful use of equipment and supplies, and sharing responsibility for classroom management; and (2) a responsible attitude toward starting the day's work promptly, working steadily, holding to high standards of performance, measuring achievement, and eliminating errors.

Evaluation of student progress in acquiring these attitudes will be approximate rather than absolute because a teacher's understanding of any student is incomplete and inexact. Nevertheless, within a few weeks teachers should be able to divide students into three general categories: those who are superior in their attitudes of cooperation and responsibility, those who are average, and those who are definitely deficient.

The teacher who is a keen observer and listener can ascertain students' attitudes towards various social and economic problems through what they say in group discussion, what they say in casual conversation with their peers, and what they say in interviews with their teachers. Behaviors in relation to business and economic problems being studied often can be observed, particularly if the problems are closely related to the life of the student. What students do in school situations can be observed quite easily. Checklists and various types of anecdotal records will help the teacher gather such information.

Work-study skills can be assessed informally by systematically observing students as they use reference books, dictionaries, and the index of a book; by observing students as they prepare their shorthand homework; and by examining in oral or written form their ability to interpret charts, tables, and statements in a normal classroom situation in general business or bookkeeping.

Powers of thinking can be assessed informally by observing the students' abilities to draw inferences or make interpretations of verbal, graphic, or statistical data in oral and written reports. The ability of students to apply concepts and generalizations taught in a business law or consumer economics class to specific situations may be observed as a part of regular classroom instruction.

Muse writes that attitudes, character, and personality are most clearly revealed by the use of prepared evaluating or rating scales.[5] Travis has her students make a list of traits that lead to business success, and from the individual lists, a composite list is then prepared by the class or by a committee of students.[6] The students, under the teacher's guidance, develop a rating chart from the master list, and use it periodically during the semester to evaluate attitudes and personality traits.

## SELF-EVALUATION

One major purpose of evaluation should be to help the student do an adequate self-evaluation. The student is the one most directly affected by the evaluative procedures, and a fair evaluation system gives security and confidence. Too often the grading, reporting, and testing appears to students as something done to them, not something in which they are active participants.

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[5]Muse, Paul F. "Evaluating for Individual Growth in Business and Office Education." *American Vocational Journal* 41:34; March 1966.

[6]Travis, Dorothy L. "Improving the Basic Business Program: Evaluate in Terms of Behavioral Changes." *Business Education Forum* 13:17; March 1959.

Self-evaluation is a basic part of effective learning; and students are helped to grow toward maturity by assuming personal responsibility, by setting individual goals, and by measuring their own progress in terms of their purposes, potential, and needs. The progress chart that many typewriting teachers have students keep in their beginning course is but one example of how the student can measure and chart progress on timed writings.

Evaluation should bring the student satisfaction. Knowledge of progress or lack of progress, if seen in the light of the total evaluation process, is helpful, not threatening. Evaluation procedures can raise the level of aspiration of students.

Businessmen frequently remark that young employees have very little or no understanding about how to evaluate their own work, having always relied on the instructor to tell them what their "mark" is. Young employees have frequently never been asked to judge their own work in light of acceptable standards. The evaluation of students would be more effective and less difficult for business teachers if students were taught how to evaluate their own work. Classroom strategies for evaluation should make provisions for self-evaluation.

## SHOULD STUDENTS EVER FAIL?

In deciding any strategies for student evaluation, the teacher must decide whether or not students should fail. Douglas, Blanford, and Anderson write that a number of teachers believe that no student should ever fail.[7] The fact that a student has poor knowledge of the subject matter of a course may not be the student's fault, but the fault of poor teaching. An additional argument may be that failing a student in general business does not accomplish anything other than make the student feel inferior. Is it fair to compare a student of limited intellectual capacity with one of superior capacity? It isn't the student's fault that he/she is dumb. One final argument may be that there are more important things than subject-matter knowledge and that, although a student might not have the essential knowledges of the subject, he/she is nonetheless learning to cooperate with a group; the fact that students are in school and keeping out of trouble is sufficient reason to pass them and keep them in school.

On the other hand, it might be argued that if we do not fail a student who does not meet our minimum standards, we may be doing the student a disfavor. According to Douglas, Blanford, and Anderson, after leaving school the student will have to face the reality of not having the same ability as others.[8] Are we not detracting from the students who do pass if no students fail? Are we being fair to employers if we permit them to believe a student is competent in a given subject? And finally, by passing everyone is there not a danger of destroying the respect and confidence of the public in

[7]Douglas, Lloyd V.; Blanford, James T.; and Anderson, Ruth I. *Teaching Business Subjects.* Third edition. Englewood Cliffs, N.J.: Prentice-Hall, 1973. pp. 79-80.

[8]*Ibid.*

our subject areas and in our schools? Our purpose is to help students learn; if they do not learn, they should fail.

In developing strategies to evaluate students, each business teacher must decide whether or not students should ever fail. A strong case can be made for both sides of the argument. The teacher's own philosophy of the purposes of evaluation and grading will probably decide the issue.

## COMPETENCY-BASED EDUCATION

One of the newer strategies for evaluating students is competency-based education. *A Teaching-Learning System for Business Education* by Popham, Schrag, and Blockhus implements the concept of competency-based education and is perhaps the best source available today in business education on this subject. The authors define a competency as "an essential task performed by a worker or consumer at a stated standard."[9] Competencies and performance objectives are related. The mastery of several performance objectives would enable the student to demonstrate a competency. The teacher selects those competencies that meet the objectives and that are needed by successful entry-level workers, consumers, and citizens. The teacher then constructs performance goals for the selected competencies and constructs tests or other appropriate measurement devices.

Popham, Schrag, and Blockhus write that evaluations in a competency-based course or program are criterion referenced; e.g., a test measures whether the student meets a stated standard.[10] Goals are specified and agreed to in advance of instruction. Students must be able to demonstrate ability or competence in a specific area. They are held accountable or responsible, not for a passing grade, but for attaining a given level of competence. Evaluations can measure what the student produces (product) or the efficiency of the technique used in creating a product (process) or both.

Competency-based instruction promotes self-pacing of students through modules or learning experiences. Each student proceeds at a speed consistent with his/her needs, achievements, and time commitment. Emphasis is placed on exit rather than entrance requirements.

The competency-based education movement has many critics including teachers, union officials, and administrators. The major criticisms point to the endless lists of competencies for each subject area, the problems of time and personnel for measuring competency attainment, and the difficulties of measuring competencies in the affective domain.

Strategies for evaluating students are most successful if the objectives are clearly stated and outcomes determined in advance of the learning experience. A variety of measuring instruments needs to be selected in terms of ability to measure outcomes. Student evaluation is a continuous process and to be successful requires the participation of all who are involved in the educational enterprise—teacher, learner, and employer.

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[9]Popham, Estelle L.; Schrag, Adele Frisbie; and Blockhus, Wanda. *A Teaching-Learning System for Business Education.* New York: McGraw-Hill Book Co., 1975. p. v.

[10]*Ibid.*, 88.

CHAPTER 10

# Strategies for Evaluating Teachers

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Increasingly, recognition is given to the importance of evaluation of teachers. Not a new concept, evaluation has occurred in a variety of forms since the days of the earliest teachers. The element of newness revolves around the increasing demands for formal, documented evaluation processes. These demands have been influenced by continually higher expenditures for education during an era in which enrollments are projected to decline. Another major impact has been the challenge that students are not acquiring the appropriate competency expected of the academic system. In addition to demands from taxpayers, parents, legislators, and administrators, teachers themselves are demanding greater considerations and are encountering more conflicts with governing units. Additionally, the turbulent period of student unrest during the late 1960's served to direct a considerable amount of attention toward educational institutions. Therefore, a background exists for renewed concern for evaluation, and this concern will continue to emerge and manifest itself.

Basically, evaluation represents attempts to identify effectiveness of achievement. Improvement of performance, commonly regarded as a fundamental purpose of evaluation, is based on the premise that the evaluation process enables teachers to recognize strengths as well as areas in which performance needs to be improved. A systematic procedure for examination of teacher performance by administrators is another phase of evaluation; this phase includes formulation of data for various types of administrative decisions that must be made. In theory, the evaluation process represents a means to identify responsibilities of teachers and administrators. In recent years, the term "accountability" has been used to evaluate these responsibilities.

The process of evaluation encompasses numerous areas of disagreement. Many problems arise from the basic responsibility of determining exactly what constitutes a "good" teacher; furthermore, the situation is somewhat complicated by delineating what is a "good" education. Another troublesome factor is the increasing necessity to formally evaluate concerns that were not previously subjected to demands of rigorous analysis. Additionally, the fact that student achievement and learning simply cannot be evaluated in the precise manner of a finished product rolling from an assembly line must be recognized.

Of necessity, achievement is compared to some type of definable level

of performance, but structuring criteria for measurement is no easy task. Dressel noted that "there is no agreement among faculty members as to what constitutes good teachers."[1] This comment is indicative of the challenge encountered in attempting to formulate strategies for evaluating teachers. This is not to say that we are without guidelines, but that we disagree greatly about what constitutes the most appropriate guidelines.

Usually, teachers are involved in many activities in addition to their classroom obligations. Such activities, being a part of the teacher's job, constitute appropriate aspects of evaluation, and it is essential to develop strategies that recognize the existence of these functions. Here again, the problem of definition must be examined in a systematic, logical manner. If not, legitimate rationales for not giving a high priority in terms of work effort may easily result.

In a discussion of teachers, their duties, and the evaluation process, it should be recognized that a number of teachers, especially in institutions of higher learning, have not had formal training for the many and varied tasks they are expected to perform. Often, graduate study, oriented toward acquisition of discipline-oriented competence, is somewhat lacking in teaching graduate students how to teach. Additionally, teaching assignments may involve such concerns as public service, professional service, and creative endeavors for which teachers possess minimal experential backgrounds.

Despite these many complexities and lack of concrete definitions, the need for development of effective strategies is certainly present. Priorities need to be clearly examined and strategies carefully formulated. The literature contains a wealth of information on the subject; however, strategies must be developed that are applicable to existing circumstances.

## DEVELOPMENT OF STRATEGIES

*Preliminary planning.* Before any evaluation program can be used, much time and consideration must be given to analyzing the different kinds of evaluative techniques available. Great care should be taken to select only those strategies that are most applicable and meaningful. The kinds of evaluative devices used at one institution or in one department of a school might not be as suitable in another situation. That we are now in a period of "accountability" and frequently seek student involvement does not imply that we should hastily develop our program. Faculty involvement is most important. A faculty committee should be selected to investigate and develop any procedure to be used. All teachers to be evaluated must be kept informed about the procedures of evaluation and the uses that will be made of the results.

All materials and information collected should be carefully filed and documented. The "due process" concerns of today's society necessitate that careful and complete records be maintained. Every teacher is entitled to examine these records at any time. Consequently, any recommendations should be based on available information and documented. The inability of

[1]Dressel, Paul L. *Handbook of Academic Evaluation.* San Francisco: Jossey-Bass, 1976. p. 341.

the evaluator to explain in detail how a decision was reached may create many problems. Subjective opinions should be kept to a minimum.

Once the evaluative procedure has been determined, plans should be made as to how the data collected will be processed. With computer facilities available at most institutions, the development of answer sheets and scoring procedures should be planned so that this equipment may be used effectively.

*Formulating evaluative procedures.* The first step in the actual administration of an evaluative plan, after deciding what plans are to be used, is the determination of objectives. Just what is the purpose of the evaluation? If it is primarily improvement of instruction, certain considerations will be required. If it is to be used for administrative purposes, other considerations will be necessary. It is very difficult to develop a procedure that can be used effectively for more than one major purpose.

After the major objectives have been determined, the device—questionnaire, checksheet, rating scale, or whatever—should be developed. Each evaluative procedure should be developed only after examining a number of similar devices used at other institutions. Faculty involvement obviously is very important at this stage. What time of the year the rating or checksheet is to be used must be considered. All teacher ratings should be made at approximately the same time of the year. Usually, for student ratings, a week or two near the close of the semester should be designated.

When the information is collected, it should be tabulated and carefully analyzed. Again, if student ratings are used, the results should not be made available to the teacher until after the close of the semester. Great care should be taken so that student responses are not identifiable. After carefully explaining how the results are interpreted, it is best to distribute the results of an evaluation to all faculty members at the same time. Then, individual teacher conferences should be arranged with the dean or chairperson charged with administrative responsibility.

*Strategies relevant to teacher evaluation.* Today, many different methods are used in teacher evaluations. Student evaluations, used by many institutions, have received much publicity in recent years. There are both "pros" and "cons" in the use of these evaluations.

Student evaluations are not new. They have been used by many instructors over the past 40 or 50 years as a means of finding out just what students thought of the instructor's performance in the classroom. Until recently, most student evaluations were used primarily for the improvement of instruction. In the last few years, however, they are used increasingly for administrative purposes—promotions, tenure, merit, and even termination. Almost all instructors agree that they are very valuable for improvement of instruction. Much concern is expressed when they are used by administrators in making policy and salary decisions. If student evaluations are carefully used and great care is taken in explaining to teachers that these evaluations are used along with many other criteria, most teachers will have little objection to their use. However, student evaluations should not be used as the major basis in decision making.

The student evaluation form or checksheet should cover at least two

areas, the instructor and the methodology. The instructor section should be concerned with preparation for class, knowledge of the subject, enthusiasm and interest in the subject, intellectual motivation, ability to communicate, fairness in grading, rapport with students, availability of instructor, willingness to help students, and tolerance. Several other items might also be included.

The methodology area should be concerned with lectures, discussions, instructor and student demonstrations, individualized instructional activities, instructional media, instructional materials, course outlines, and examinations. A rating scale, perhaps from 0 to 10, on each of the items would give students an opportunity to indicate their varying opinions. Additional information could also be obtained concerning the course, the environment, or other items.

Most important of all, an opportunity should be given to each student to offer comments, either complimentary or critical, as to what they like best or least about the instructor or course. Suggestions for change or improvement should be solicited. Many teachers feel that the comments made by students are most worthwhile. These comments are difficult to tabulate and analyze, but they are most valuable.

Another kind of evaluation used in many institutions is that conducted by the chairperson or supervisor. Under most circumstances, the major responsibility for teacher evaluation should fall upon the immediate supervisor. Strategies used for evaluation might be determined by the top administration, but the details of each evaluative procedure should be developed by the chairperson and the faculty members in the division or department. In the past, these evaluations have frequently been made in an arbitrary and subjective manner. Specific information should be kept and placed in each faculty member's folder. When the time comes for recommendations, promotions, salary increases, or other purposes, the folder should be reviewed.

Because of the increased demand for accountability, a better system of securing relevant information is needed. In order to determine the effectiveness of each instructor objectively and more scientifically, it is necessary to determine, first of all, just what each teacher's responsibilities are. A determination of the different activities of all faculty members must be made. These generally include instruction, academic advising, college or institutional services, supervision of student teachers, organizational sponsorship, supervision of graduate research, recruitment and placement, professional services, public services, creative contributions, scholarly research and publications, and obtaining research and grants. On a 100 percent basis, each faculty member, along with the supervisor, should determine the different areas of responsibilities and the percentage allocation assigned to each. Each faculty member will probably have different assignments and responsibilities. The values of each assignment should be determined at the beginning of each year or rating period. If assignments change, perhaps some adjustment may be necessary during the period.

At the end of the period, these responsibilities are rated by the supervisor. A performance rating scale must be established at the beginning of

the period. Each responsibility is then evaluated according to the performance rating scale. On an individual conference basis, each teacher should be informed by the evaluator exactly how each rating was determined. If faculty members feel they have not been fairly rated, they should be given an opportunity during the conference, or shortly thereafter, to raise any questions or concerns. Because of additional information not available to the evaluator, perhaps some adjustment may be needed at that time. Once a rating is established, however, it should not be changed, except in extreme situations. Obviously, ratings cannot be made on an arbitrary basis, but must be substantiated by factual and statistical data.

*Evaluation of noninstructional activities.* Most teacher evaluations are based primarily on instruction, but an increasing emphasis is being placed on a number of noninstructional activities. Faculty advising of students is an assigned duty of teachers at many institutions. If faculty members are to accept advising as an important function, they must have time to prepare for it and to do it, and they must be rewarded for it. All faculty members are not good student advisors; therefore, care should be taken to select only those teachers who have an interest in and capacity for this kind of work.

The following criteria should be utilized in evaluating the effectiveness of advising. Are students satisfied with advising? Are degree requirements being systematically met? Are student programs developed in light of placement and employment opportunities? Are student capabilities and interests being given proper consideration? These and other criteria need to be carefully analyzed.

The value assigned to activities such as research and publishing varies greatly between instructors and institutions. Many schools place considerable emphasis on these activities. If research and publishing are emphasized, a basis for evaluation of the importance, effectiveness, and practicality of these activities must be developed. Too frequently, the emphasis of research has been placed on obtaining grants or scholarships. Although these are important, equal consideration must be given to nonreimbursed research carried on by many teachers and frequently applied to their teaching situation.

Sponsorship of organizations, supervision of student teaching, and supervision of graduate research are important functions performed by many teachers. Adequate time must be provided for effectively performing any of these activities, and proper consideration should be given to them in the evaluative process.

Professional and public services are a part of most teachers' activities. These services are frequently very time consuming and can actually take needed time from the instructional program. An evaluative procedure is needed to weigh carefully the value of each activity as it relates to the instructional program and the growth and development of each individual.

Colleague or peer evaluations are used occasionally, but they are quite controversial. Usually, teachers do not like to evaluate their colleagues. Faculty members commonly have some views about the teaching competence of their associates in the same department, but these views are seldom based on direct observations. Rather, casual conversations, student remarks,

and student performance in more advanced courses are the basis for appraisal. Classroom visits by peers is seldom practical. Visits by department chairpersons or deans are made occasionally, but they are quite time consuming. An isolated observation is essentially a wasted effort, since the presence of an outsider can disrupt teachers in the performance of their usual classroom procedures; little of value is gained.

Self-appraisal by every teacher is highly desirable. Along with chairperson and/or student evaluations, teachers should make a self-examination of their performance. In the evaluation process, the chairperson should request teachers to bring with them judgment ratings of their own performance. An effective device that can be used to evaluate their own performance is audiotape or videotape recordings. Most institutions have this kind of equipment. A replay of these tapes may be both a painful and an illuminating experience. Seldom do we take the time or have the opportunity to see or hear ourselves as others do.

## CONSIDERATIONS IN DEVELOPING AN EFFECTIVE STRATEGY

In structuring evaluation strategies, there are various elements that merit examination. Granted, there is no one way to accomplish a successful evaluation system; nevertheless, certain considerations may promote the design and implementation of effective strategies.

*Value of participant involvement.* Understanding the necessity and importance of strategies selected for use is an important concern. If an atmosphere of mutual understanding and cooperation by all concerned is developed, much can be accomplished. It is pertinent that opportunities for input, questioning, and examination be provided; many times certain strategies are resisted simply because a proper understanding is not present, and people exhibit a tendency to resist something they do not understand. Therefore, actual participant involvement may be extremely crucial to acceptance of strategies that are implemented.

Although various approaches are available, committees, meetings of participants, and solicitation of responses are valuable methods for eliciting responses from participants about alternative strategies. When structured accordingly, opportunities are provided for expression of views that are essential to evolvement of functional strategies. In addition to committees and meetings, solicitation of written, anonymous replies gives those who may not wish to comment publicly an opportunity to present their views and positions.

*Controllable factors.* Another consideration is that evaluation be based upon factors that are controllable by those being evaluated. Commonly and legitimately, persons may feel that evaluation is working against them because of strategies based upon elements over which they have no control. For example, teachers may not be able to select course assignments, times of their class meetings, and size of their classes; however, variables such as expectations from students, approaches to examinations, development of course outlines, and knowledge of subject matter are factors that do lend themselves to influence of individual teachers.

*Knowledge of performance responsibilities.* Knowledge of performance responsibilities is a key concern that should be explained and known by teachers who are being evaluated. By clearly specifying areas of expectation prior to the evaluation period, teachers know the bases upon which judgments will be made and have opportunities to meet performance expectations. Otherwise, the system resembles something like participating in a game and later reading the rules to see how it is played.

Commonly, knowledge of performance expectations is formulated in consultation between teachers and appropriate administrators; various strategies ranging from simple written statements of responsibilities to complex quantitative methodologies may be used to specify and evaluate results. This process leads to another important consideration; following an evaluation period, teachers should be given feedback, or knowledge of results, at the earliest opportunity. They should be given a fair, objective appraisal without hurriedly passing over weaknesses. In addition, administrators have a responsibility to help teachers improve upon any weaknesses that may need corrective action. Once again, the roles of atmosphere and cooperation become extremely important; too often, these factors are not allocated the importance they deserve. Generally, teachers will not resist constructive criticism presented in a professional manner and oriented toward making them better teachers.

Evaluation strategies do have definite impacts upon teachers. Although most teachers probably do their best to achieve commendable results on the various devices used in the evaluation process, these practices promote considerations that may not be readily apparent. For instance, student and chairperson evaluations may create an additional awareness on the part of teachers about tasks at hand. Where evaluation is mandatory and results administratively used, teachers may be forced to examine their performance from the viewpoints of those being served; possibly, this awareness enables them to gain insight into their teaching practices and may be a stimulant to greater effectiveness. In addition, evaluation of specifics such as required course outlines might encourage teachers to plan and organize courses more thoroughly as well as update materials and keep reading lists current.

*Quantitative and qualitative concerns.* In strategy development, consideration should not necessarily be restricted to quantitative indicators. For example, numerical averages may well be indicative performance measures, yet open-end responses on student evaluation forms such as "I liked best/least about the course/instructor" may yield a wealth of valuable data. Also, provision of space for student comments to quantitatively measurable responses enables respondents to include remarks that may be beneficial to improvement of instruction.

Questions continually emerge about validity and reliability of evaluation strategies, and it is a truism that the ultimate in evaluation procedures has yet to be found and implemented. Nevertheless, some type of strategy will be utilized. It may be beneficial to use a particular evaluation form or instrument long enough for a viable data base to be determined. By constantly doing things differently and changing evaluative indices, acceptance

may be hindered; also, any type of comparative base will undoubtedly be extremely difficult to formulate.

However, this does not imply that conformity to a particular procedure should mean abandonment of other alternatives and result in "locked-in" strategies. Flexibility and acceptance of change are essential considerations. We have witnessed tremendous evolutions of knowledge available for transmission to students; therefore, blind adherence to a set system of evaluation may not be appropriate in tomorrow's teaching environment.

Too often, the best usage is not made of data derived from various strategies. While rudimentary calculations and accompanying comparisons may be formulated, much of the potential to be learned is not examined. For instance, available results might well be used to place teachers according to their strengths. While some teachers may perform best with younger students, others may achieve better results by teaching older students; certain teachers may be more at ease and do better with smaller classes, and others may excel in larger classes. With modern technology and quantitative techniques available, perhaps additional emphasis upon these concerns may be forthcoming.

*Need for an effective data base.* Characteristically, educational environments contain tremendous reservoirs of knowledge. Therefore, consideration might be given to deriving the most from resources available. Interim periods between school sessions provide a splendid opportunity for seminars and workshops aimed toward improvement of competencies and illustrations of emergent methodologies for transmission of educational materials to students. According to needs that become apparent, time could be allocated to programs that would be most beneficial. Too often, these considerations are neglected; many times, they are completely forgotten.

Where merit remuneration is considered, evaluation is often timed to correlate with the annual salary determination. To teachers, therefore, results may be viewed as being hastily implemented, not comprehensively examined, and unnecessarily tied to salary with little corresponding relationship to the goal of improvement of instruction. Perhaps effective planning ahead of time without last-minute rushes to meet deadlines would enhance the system and make it more amenable to the objectives being served.

A considerable amount of disagreement exists over determining who is to evaluate whom. Indeed, there is, and always has been, justification for evaluation by superiors. However, in today's academic environment with questioning as to determination of performance accountability there are also demands for taking into account viewpoints of other participants such as students and peers. These persons are in positions to provide different types of data that may be useful in promoting effectiveness. Again, the merit of approaching evaluation in an acceptable atmosphere becomes paramount. If viewed in the negative sense, implementation of strategies will encounter many obstacles; however, a positive approach with emphasis upon improvement of instruction, not penalties or stimulation of detrimental competition among teachers, may yield innumerable benefits.

The manner chosen for dissemination of results is a pertinent consideration that should be examined. Too often, evaluative results are relayed to teachers without recognition of how they will be received. For instance, it is relatively easy to rank teachers and tell them how they rate in comparison to a delineated group. This may result in competition for higher rankings without recognition of other pertinent objectives and purposes.

To examine every facet of evaluation is impossible; yet, there is an obligation to explore as many considerations as possible in development of effective strategies. As the process is complex and incorporates differing views, the essential concern is at least to recognize the many possible alternatives and to take advantage of every opportunity to promote effective teaching, delineate paths toward improvement of instruction, and formulate a solid basis for demonstrated accountability.

## SUMMARY

Today, a great deal of interest is evidenced at all levels about the effectiveness and value of the different strategies used for evaluating teachers. The current emphasis on "accountability" and "due process" has caused much of this revival of interest in evaluation. In too many instances, various methods of measuring effectiveness have become bogged down in controversy, distrust, and apprehension as to the use that will be made of the results. Time and effort must be directed toward informing and gaining support of teachers concerning the purposes and uses of every evaluative procedure.

Basically, most teachers are "good" teachers. If they were not sincerely interested in teaching, they would have left the profession and taken employment in other fields or endeavors. Only a few are doing little more than drawing their pay. The purpose of any evaluative procedure should be to help the good teacher become better and to offer evidence whereby the ineffective teacher can be eliminated. Student evaluations are among the best devices for improvement of instruction. Conscientious "self-evaluation" along with supervisor consultations also improves classroom procedures.

Supervisors and administrators, by the very nature of their position, have the major responsibility in developing strategies for determining the effectiveness of the faculty in their department or areas. Dressel reports that although evaluations of teaching recurrently become the focus of attention, there is virtually no evidence that the effort, carried out largely through student evaluation forms or checklists, has had any significant impact on the improvement of teaching.[2] In fact, there have been many instances where the use of evaluative procedures has caused many difficult problems. Nevertheless, evaluation strategies are necessary. If a cooperative effort is used in developing the strategies, it can considerably aid in promoting a cooperative team effort as well as improved methods and techniques used by the instructors. Several different procedures should be used in determining a teacher's final evaluation. The final consideration in the development of any strategy for evaluation of teachers should be: Does this result in an improvement for student learning?

[2] *Ibid.*, p. 373.

CHAPTER 11

# Implications of Legislation Relating to Confidentiality of Student Records

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Oklahoma State Department of Education, Stillwater

Two important pieces of legislation have been enacted or amended in recent months which have a bearing on institutional and personal responsibilities. The first of these, the Freedom of Information Act (P.L. 93-507), has been characterized as "the public's passkey to the vast storehouse of government knowledge." Before the passage of this Act, individuals looking for information from government records were required to prove that their need for information outweighed the government's right to refuse access. The Act reversed the process by establishing the public's right to know unless the government demonstrates a need to withhold. It is readily apparent that this puts a new light on all levels of governmental records.

The second of these Acts, the Privacy Act of 1974 (P.L. 93-579), serves to assure that individual rights are protected. Recognition is given to the need for gathering certain data necessary for institutional operations, but simultaneously assures that such information will be gathered with the full knowledge of the individual. Under the Act students, for example, are entitled to know what type of educational information will be collected, to know how and by whom it will be used, to examine such materials, and to request correction of possible inaccuracies.

While it might appear that these two Acts are contradictory, the reverse is actually true. They complement each other. The Freedom of Information Act specifically exempts those records, such as medical records, which would constitute a clearly unwarranted invasion of privacy. In addition to protecting citizens against the release of personal information against their wishes, the Privacy Act gives individuals the right to know what has been collected, to examine such materials, and to request revision of the materials. Both Acts provide civil remedies against federal agencies that violate provisions of the law and establish criminal penalties against those who willfully violate the law.

Two companion pieces of legislation, Section 438 of the General Education Provisions Act (Title IV of P.L. 90-247) and the Family Educational Rights and Privacy Act (P.L. 93-380), are the basis of justification for this chapter. These Acts have necessitated substantial revisions in policies for gathering and handling information about students.

## WHAT IS THE LAW?

To read the law alone would not be sufficient to identify all of the requirements of the legislation. It is the function of the Congress to enact the law, and it is the function of the executive branch to implement the law. The normal implementation process is in the form of proposed rules and regulations published in the *Federal Register* with a period of time allowed during which responses to the proposals will be received. For individuals wishing details on the law and the proposed rules and regulations originally published, see the *Federal Register*, Volume 40, Number 3, dated January 6, 1975, pages 1208-1216. Although the normal response period allowed is 30 days, a 60-day period was allowed to assure adequate time for concerned institutions, individuals, or groups to respond. This factor alone is significant and illustrates the degree of concern apparent in the U.S. Office of Education that sufficient time be allowed to address this problem.

Upon termination of the response period, the Secretary of Health, Education, and Welfare considered reactions to the proposed rules and published the "Final Rule on Education Records" together with comments on action taken in adjusting the proposed rules. The "Final Rule" with comments can be found in the *Federal Register*, Volume 41, Number 118, dated June 17, 1976, pages 24662-24675. As a further indication of concern, additional input was solicited during a 90-day period commencing July 1, 1977, with comments on the regulation and its operation as it affects the day-to-day activities of educational agencies and institutions during the 1976-77 school year. This should allow for proper adjustment of the language to assure protection while avoiding the possible creation of a bureaucratic monstrosity.

Briefly stated, the Family Educational Rights and Privacy Act of 1974 is as follows:

Educational institutions that receive any type of funding under a grant, contract, loan, or any other type of funding under the programs for which the U.S. Commissioner of Education has administrative responsibility, as specified by law or by delegation of authority pursuant to law, shall, as a condition to receiving such funds, certify that the institution is in compliance and will continue to comply with the provisions of this Act. The Act requires educational institutions to:

1. Maintain careful control over access to and the release of educational records the institution maintains.
2. Obtain written consent before releasing personally identifiable data about students from records to other than a specified list of exceptions.
3. Provide students access to official records directly related to the students and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading, or otherwise inappropriate and to establish procedures whereby students shall have access.
4. Notify students of rights established pursuant to the Act.
5. Maintain and make available to students, upon request, the record of all requests that have been received concerning their education records and the action taken by the institution in reply to those requests.

6. Issue a certificate of compliance pursuant to any application, proposal, or plan for a federal grant, contract, loan, or funding program or make reference to an assurance of compliance previously filed with the Secretary of Health, Education, and Welfare and to require such assurance from other educational institutions in the execution of subgrants and subcontracts.
7. Comply with complaint, hearing, and review procedures.

The Act defines "education records" as any and all records which are maintained by the institution and which directly relate to the student. The term does not include records such as:

1. Private files of faculty and staff not shown to others
2. Police and discipline records that are maintained solely by the law enforcement unit and are maintained solely for law enforcement purposes and are not made available to persons other than law enforcement officials of the same jurisdiction
3. Records maintained by a physician, psychiatrist, or psychologist for use only in connection with the provision of treatment to the student and not available to anyone other than persons providing such treatment.

The question of means of enforcement is always controversial. Failure to comply with the provisions of the law, in this instance, can result in the cutting off of institutional funds received from federal sources. There has been real concern expressed by the Secretary of Health, Education, and Welfare as to the effectiveness of such an approach. The Secretary's office has encouraged individuals and groups to suggest more appropriate means that can and should be available to address this problem.

## WHO LOOKS AT YOUR COMPLIANCE?

The primary overseeing body authorized to look at employment and personnel recordkeeping practices is the Privacy Protection Study Commission. This Commission is to perform three functions: (1) look at various information systems of governmental and private organizations to see what kinds of standards and procedures have been established to protect personal information; (2) recommend to the President and the Congress the extent to which the requirements of the Privacy Act of 1974 should be applied to other information practices of those organizations by legislative, administrative, and voluntary adoption; and (3) make a report of other recommendations necessary to protect the rights of individuals while meeting the legitimate needs of government and society for information.

Although this Commission is directed chiefly to organizations in the private sector, its study is to encompass public sector organizations also. In order to have some guidelines for analysis, the Commission plans to use the five "fair information practices principles" of the Secretary of Health, Education, and Welfare's Advisory Committee on Automated Personal Data Systems as a yardstick. The five principles to be used are: (1) there must be no personal data recordkeeping system whose very existence is secret; (2) there must be a way for individuals to find out what information about them is in a record and how it is kept; (3) there must be a way for individuals to prevent information about them that was obtained for one purpose from

being used or made available for other purposes without the individual's consent; (4) there must be a way for individuals to correct or amend a record of identifiable information about them; and (5) any organization creating, maintaining, using, or disseminating records of identifiable personal data must assure the reliability of the data for their intended use and must take precautions to prevent misuse of the data.

It is obvious that all of the data-collecting activities and precautions have a recurring theme—accuracy, relevance, timeliness, and completeness. These are the criteria that must be used.

## WHAT ARE THE IMPLICATIONS?

Educators, in general, have been and are legislatively naive. For many years too many of them have taken the attitude that legislation and the political process should take place outside the framework of their activities. Too many educators have acted as if their fields of study are outside the realm of legislation and have continued blithely to pursue practices established over the years. It is very probable that only the tip of the iceberg has surfaced at this point. Until the last two years, little attention was given to any concerns about violations of individual rights in the gathering of data. There were numerous legitimate activities that required the accumulation of data for decision making, and few if any questions were asked about either the process or the product of such activities. There are three populations which may have to evaluate or reevaluate their positions with reference to types of data collection which will be undertaken or continued—institutions, faculty and staff of institutions, and students in institutions.

*Implications for institutions.* Most institutions, while not dependent on federal funds, do have substantial funding from various federal sources. Failure to comply with the legislative requirements could jeopardize those funds.

Educational institutions exist for the purpose of assisting individuals in reaching their highest potential. Each of these individuals varies in ability, background, interests, social and emotional maturity, and ultimate goals. It is recognized that in order to meet the varying needs of these individuals it is necessary to maintain certain types of records. Until recently, little attention has been given to the type, quantity, or quality of records kept. Each institution has been responsible for its own data-gathering activities, and this has allowed individuals in staff and faculty positions to gather data for their own use somewhat indiscriminately. Institutions can no longer use such a loose approach without running the risk of penalties being imposed.

In order to assure that institutions have met their responsibilities, most have aggressively developed student records policies which identify the total process under which the institution operates. The most common pattern is to divide the format into two major classifications—the regulations under which student records are maintained and a description of the types of records maintained. In implementing the law, both are important.

There are several types of regulations that should be considered, among

which are: (1) where the records are located and who is responsible for proper maintenance; (2) how the students gain access to the records; (3) a description of how the student can question the maintenance of or content of records, and how and to whom information will be released; (4) how and when students can or should waive their rights of access; (5) restrictions on listing of students; (6) keeping records on who obtains access to files; and (7) under what conditions records are kept and duplicated and the method of disposal. Other information is frequently included, but the above appear to be somewhat universal.

The description of student records maintained varies considerably. It is probable that as institutions evaluate the purposes for which records are kept, the types of records will be consolidated or some may be eliminated entirely. There are usually two types of records maintained—those maintained by administrative staff and those maintained by instructional staff.

In administrative records it is important to identify not only what records are maintained but also who is responsible. Among these administrative records are: (1) the permanent record in the registrar's office; (2) class lists; (3) records on disciplinary actions; (4) membership in organizations; (5) financial aids; (6) health records; (7) payroll, if students are employed; (8) records on institution housing; and (9) records of counseling. Instructional staff maintain records such as: (1) advisement records; (2) student teaching records; (3) class lists; (4) grade rosters and attendance records; and (5) exam papers.

Although each of these records may have served a distinct purpose in the past, it is possible that some of them may have been maintained because it has been done that way in the past. This may not be a valid reason under the new legislation. All institutions should take an active part in looking at what is being maintained, evaluating each type of document to determine its relevance, making appropriate adjustments in discarding those not needed and refining those to be retained, and assuring that a proper policy statement is available explaining the process. If institutions accept this new requirement with the proper attitude, it may be to their benefit. Paperwork and its retention have created serious storage problems. A complete look at the whole program of student records may result in a substantial saving of time and space with a resultant saving in dollars.

Although the development of an effective policy may suffice in meeting the letter of the law, institutions should implement the policy by assuring that all individuals—at least staff, faculty, and students—receive information about the policy accepted by the institutional population. Those affected by the policy should be a part of the policy developmental process. This may be invaluable in reducing gaps in the policy that could cause institutional embarrassment.

*Implications for faculty and staff.* Does your institution have a student records policy? If so, what does it include? Is it comprehensive enough to meet the requirements of the Privacy Act? Does it provide you with the type of information that will give you reasonable assurance that you are conforming to the law? Are these questions you have been asking? If not,

perhaps you should become concerned. The old adage that "ignorance of the law is no excuse" applies under the new legislation. Familiarity with the law is an institutional responsibility; and you, as an agent of that institution, have an equal responsibility.

If no policy has been developed or if existing policy is not in sufficient detail, faculty and staff can render a service by calling this to the attention of the administration. Since most institutions have developed some type of policy, faculty and staff must become familiar with that policy to assure conformity. They must continuously evaluate and reevaluate the type of records they are maintaining to assure the relevance of each. It would be to the advantage of all concerned to keep such records to a minimum.

Students should be advised of what records are being kept. If some are being kept beyond those time periods identified in policy statements, those records should be discontinued or the policies changed to indicate the maintenance of such records. The maintenance of records beyond those identified in policy could be hazardous to your professional health.

*Implications for students.* Although there may be no appreciable change in records being kept, students now have the opportunity to at least be aware of what is being kept, by whom, and for what purpose. There have been instances where certain types of records have been used to the detriment of students without their even knowing that the records were being kept. During the 1960's, some students were identified as guilty by association with certain groups, even though they may have had no active role or no knowledge that such a record was being kept.

Since students now have the opportunity to have some control over records kept on them, they should perform certain actions. They should (1) become familiar with the legislation that indicates the standards to be met, (2) check their institution to assure that there is a student records policy, (3) check their institution's policy against the legislation to determine whether or not it is comprehensive enough to meet the requirements of the law, and (4) if there are doubts as to whether or not there are violations of the policy, initiate action to assure compliance.

This new piece of legislation can and should improve relations between students and institutions. If the right attitude is assumed in attempting to meet the intent of the legislation, it can work to the advantage of the various populations concerned. Failure to comply could have an adverse effect on education. It is hoped that institutions, faculty and staff, and students will work cooperatively in this and other areas in education to provide an improved climate in which learning can be facilitated.

CHAPTER 12

# Student Follow-Up and Program Evaluation Systems

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It is almost universally agreed that information from and about students after they leave school or college is important to the school or college in evaluating its program and in planning for the future. It is also almost universally agreed that the task of obtaining "follow-up" information that is reliable, valid, and useful is a difficult one.

Two developments in recent years have added credence to the above statements, particularly in regard to business students: (1) the 1976 amended Vocational Education Act, PL 94-482, Title I Vocational Education, requires that schools receiving funds under the Act report each year information such as numbers of students who have completed occupational programs and found employment in the field for which they were trained; and (2) accreditation teams have repeatedly reported that "systematic follow-up of students who have completed occupational programs" have the lowest mean rating of the items used in the evaluation procedures.

This chapter presents a review of the follow-up procedure.

## IMPORTANCE OF FOLLOW-UP

Evaluation of the business education program can take many forms, three of which are: (1) administering ability tests before and after courses of instruction; (2) examining conditions of resources, such as quality of instruction and facilities; (3) examining post-school or college experiences and perceptions of former students in order to determine whether educational goals have been achieved. This third procedure, involving evaluation through follow-up, is the subject of this chapter.

In 1974, William G. Williams and Fred A. Snyder, Virginia Department of Community Colleges, prepared a research report titled, "Follow-Up Studies of Former Occupational-Technical Students at Community Colleges."[1] This report cites a number of studies that will be referred to in this Yearbook chapter.

Follow-up studies are important in establishing public confidence and support among citizens, legislators, and executives in government. The

[1] Williams, William G., and Snyder, Fred A. *Follow-Up Studies of Former Occupational-Technical Students at Community Colleges.* Research Report No. 1. Richmond: Virginia Department of Community Colleges, 1974.

following statements included in the Williams and Snyder research report substantiate the importance of follow-up studies. Hamlin (1976) believes that "Citizen evaluation of public occupational education is probably the most important factor affecting it. On the basis of their evaluations, citizens assign responsibilities for occupational education and provide or withhold funds, personnel, and facilities."[2] Public support is a major focus of accountability. Tyler (1969) writes that "only as we can describe more accurately the results we are obtaining from the curriculum are we in a position to get the most intelligent support for the educational program . . . "[3] Rouche and Boggs (1968) refer more directly to financial implications of accountability when they state that "as a consequence of the increased need for funds, efficiency-minded legislators, parents, boards of trustees, and the public are asking whether institutions are getting the maximum value from each dollar expended."[4] O'Connor (1965) proclaims that "the existence of junior colleges depends on their ability to convince the people in their communities that they are dynamic, educational institutions capable of serving students well."[5]

## NEED FOR MORE INFORMATION ON FOLLOW-UP STUDIES

Follow-up study reports on former occupational-technical students are rarely published or widely circulated, and reviews of such studies have been inadequate, but they are important.

Writing on the subject of community college follow-up research, O'Connor (1965), as referred to in the Williams and Snyder report, observed that follow-up studies are particularly valuable in measuring the benefits of career education. He went so far as to say that "no better method exists for determining how well the technical-occupational objectives of the college are being carried out."[6]

Despite the value of follow-up research there seems to be no consensus as to how such studies should be conducted. Garland and Carmody (1970) found little agreement among institutions about adequate indicators of success in occupational-technical programs. The only widely accepted indicator was employment rates of former students. Huff (1971) also argues for greater standardization of measurement in evaluation research, pointing out that inter-institutional exchange of data and study of a longitudinal nature require standardization. Describing their investigation of institutional research in two-year colleges, Rouche and Boggs (1968) conclude that "many two-year colleges are engaging in some research activity, but that dissemination of findings is typically limited to the institution involved."[7]

[2] *Ibid.*, p. iii.
[3] *Ibid.*, p. 125.
[4] *Ibid.*, p. 1.
[5] *Ibid.*, p. 52.
[6] *Ibid.*, p. 22.
[7] *Ibid.*, p. 52.

## AN EXAMPLE OF FOLLOW-UP PROCEDURE

In March of 1973, under the leadership of the Chancellor's Office of the California Community Colleges, representatives of six California Community Colleges were brought together to meet and critique a proposal for a systematic follow-up procedure. Each person was selected for his specialized skill or experience in research projects concerning follow-up and reporting practices. Out of this meeting grew a detailed plan for a 1973-74 project to design and implement a system (or systems) for follow-up of community college students.

The model was developed by a consortium of 12 leaders in California community colleges, including occupational and general administrators, researchers, and data processing specialists. Input was solicited from other colleges and from staff of the Chancellor's Office.

It became evident early in the project that a fundamental component in the model would have to be a uniform method for classifying occupational courses and identifying occupational majors so that noncontinuing students could be categorized for various approaches to follow-up. This chapter describes recommended procedures for accomplishing these objectives and suggests methods for obtaining useful information about occupational students during and after their stay in college.

Keep in mind that the model attempts to assist the colleges in (1) evaluating and planning their occupational programs and in (2) completing required enrollment and follow-up forms related to vocational education.

## GUIDELINES FOR THE SYSTEM

The following guidelines are essential for a workable system: (1) The system must be adaptable to any community college and to all occupational programs offered by the college. (2) Operation of system must be sufficiently simple that outside expertise is not required after initial implementation. (3) System must lend itself to electronic data processing but be adaptable to manual operations. (4) System must maximize the use of current staff and minimize the necessity for hiring additional personnel. (5) System must be ongoing, not "one shot." (6) Any alternative subsystems must provide substantially equivalent information. (7) System must provide necessary information for vocational education enrollment and follow-up forms with a high level of accuracy and on time. (8) System must provide pertinent evaluation and planning information to occupational administrators and faculty. (9) System must indicate enrollments as of the census week in the semester (quarter) concerned, but must also provide flexibility for specially scheduled courses. (10) Data collection instruments must be easily readable, require a minimum of time for completion, and be in a format easily adaptable to electronic data processing. (An example of a data-collection instrument is shown on pages 122-23.)

To meet these guidelines and assumptions, the model was envisioned as having two components: (1) the Student Accounting Component, in which occupational students are operationally defined and classified and (2) the

Student Follow-Up Component, in which occupational students no longer in college are categorized and procedures are recommended for obtaining information about them, with details of procedure depending on the category.

## STUDENT ACCOUNTING COMPONENT

In the Student Accounting Component, occupation courses are classified and assigned priorities, and student majors are defined according to the occupational courses in which they enroll. The most critical aspect, therefore, of the entire model is the careful classification of occupational courses.

*Classification of occupational courses.* An occupational course is defined as one which is (1) intended to develop skills and related knowledge needed for job performance, (2) included as a part of the course sequence of an occupational program offered by the college, and (3) designed primarily for job preparation and/or job upgrading or updating and not for general education purposes.

Prior to each semester, the occupational administrator (or his delegate) should examine all courses offered by occupational departments, number each with an appropriate CID (or USOE) number, and follow (or precede) the number with a priority letter, as follows:

Priority "A"—Apprenticeship. Course is an apprenticeship course.

Priority "B"—Advanced Occupational. Course is offered in one specific occupational area only and clearly labels its taker as a major in this area. Priority B courses will generally (but not necessarily) be those taken by students in the advanced stages of their occupational programs.

Priority "C"—Clearly Occupational. Course is generally offered in several specific occupational majors within a *broad area* and is of difficulty level sufficient to detract "drop ins". Priority C courses will generally (but not necessarily) be taken by students in the middle stages of their occupational programs.

Priority "D"—Possibly Occupational. Course is introductory level occupational or is primarily a service (or survey) course for other occupational programs. Priority D courses may be taken by nonoccupational as well as occupational majors.

For borderline courses (between C and D), it is suggested that the deciding factor should be an estimate, based on judgment and experience, of the number of students taking the course whose major is judged to be occupational. If the number is estimated to be 75 percent or more of the total, the course should be identified as Priority C, otherwise Priority D.

Priority "E"—Nonoccupational. Although offered by an occupational department, course is designed for nonoccupational majors who desire acquaintance with the field as part of their general education.

It should be noted that in this model there is no operational distinction between A and B priority courses.

*Identification of occupational student majors.* For the planning and evaluating purposes of this model, student majors are classified four ways:

Class 1—Occupational major, specific major determined. All students enrolled in one or more courses labeled A or B.

Class 2—Occupational major, broad area determined. All students who are not enrolled in any course labeled A or B, but are enrolled in one or more course labeled C.

Class 3—Occupational major, area not determined. All students who are not enrolled in any course labeled A, B, or C, but who are enrolled either in (a) *one* course labeled D and a total of 7 units or less, or (b) *two* or more courses labeled D.

Class 4—Nonoccupational major. All students not classified above. Note that part-time, full-time or day, evening distinctions are not made. Procedures for identification of student majors should be applicable to all these groupings.

## STUDENT FOLLOW-UP COMPONENT

In the Student Follow-Up Component, noncontinuing students are classified two ways: (1) according to their major class, as described earlier, and (2) according to their accomplishment during the previous semester. Thus, a two-way "follow-up matrix" is obtained. Procedures for follow-up are recommended with procedural specifics dependent upon the student's location in the follow-up matrix. (An example of a follow-up matrix is shown on page 120.)

*Classification of previous semester students.* After census week, the current semester SMF and previous semester SMF (end of semester student master file) should be matched. The following definitions pertain:

Continuing student: Student named on both lists.
Noncontinuing student: Student named on previous list but not on current list.

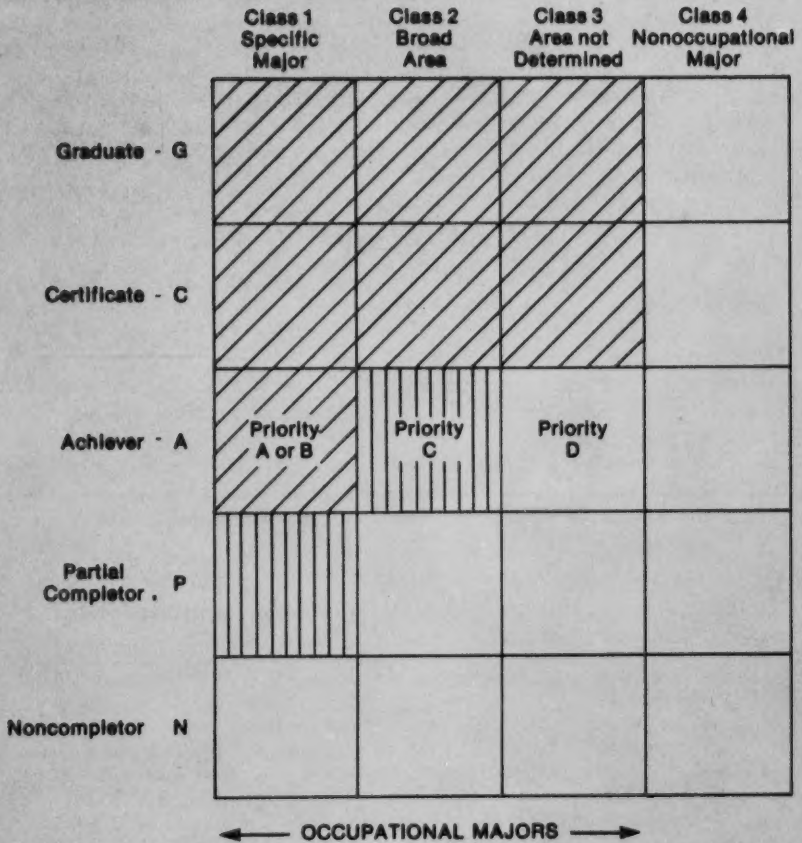
Noncontinuing students are further classified as one of the following, depending on accomplishment during the previous semester:

Graduate (G) ..... received associate degree
Certificate (C) ..... received program certificate
Achiever (A) ..... does not qualify as graduate or certificate but:
  Priority A or B ..... completed one or more priority A or B courses
  Priority C ..... completed one or more C priority courses (no A or B)
  Priority D ..... completed one or more D courses (no A, B, or C)
  Nonoccupational .... completed seven or more units (no A, B, C, or D)
Partial Completor (P) .. completed some work but does not qualify as graduate, certificate, or achiever
Noncompletor ..... does not qualify for any of the above

When filing report forms, graduates, certificates, and priority A or B achievers will be considered to have completed their programs. Priority C achievers and priority A or B partial completors will be considered to have left the program with marketable skills. Numbers obtained for fall and spring are simply added to obtain year totals.

*Follow-up procedures.* Choice of group(s) to be followed will depend on the purposes for which the study is made. As stated previously, two

## Classification of Groups for Follow-Up
## (The Follow-Up Matrix)



purposes are considered in the model: (1) completion of reporting forms required for governmental agencies, and (2) program evaluation and planning. For the first of these purposes, all occupational graduates, certificates, and achievers Class 1 must be included. For the second purpose, any or all categories may be included, depending on the needs or desires of the college at the time. It is also possible (and probably advisable) for further breakdowns to be made for detailed in-depth follow-up studies on specific majors.

Responsibility for follow-up will depend upon the general assignment of responsibilities at the college. At some colleges, it may be appropriate for the occupational dean's office; at others, the research office; at others, the counseling or placement office. Where specific program majors are to be probed in depth, it is often appropriate for faculty or department chairmen to conduct the study. If sampling is to be used, someone with a clear understanding of bias and sampling error should be involved.

## PREPARATION OF STUDENTS FOR FOLLOW-UP

Researchers who have performed follow-up studies consistently report that preparation of students while still in college provides measurable and significant improvement in (1) response rate to mailed questionnaires, and (2) completeness and accuracy of responses. Efforts are apparently especially needed for young students and for noncompletors.

One writer has characterized two types of recommended preparation: (1) mechanical, involving such items as verifying and/or updating addresses, completing EXIT forms, and generally making sure that pertinent information is on file at the college while the student is there to provide it; and (2) psychological, or "conditioning" the student to respond to future requests for information.

Following are some suggestions:

1. To alert Class 1 or Class 2 majors (all categories except N), allow 10-15 minutes of time in each A, B, or C priority class shortly before the end of the semester and—

(a) Inform students of possible future contacts, emphasizing
   1. College interest in individual's opinions
   2. Requirements for obtaining funds
   3. Opportunity to assist future students
   4. No individual identification in any published reports.

(b) Suggest student include college among people to be notified when he changes address—point out various benefits to him when college can contact him easily.

(c) If possible show student copy of questionnaire he may receive.

(d) Obtain information about plans for next semester, current address and phone number, and address of someone who will always know student's address.

Note that it is possible to obtain considerable "follow-up" information before the student leaves college. For example, students who already have

**FOOTHILL-DE ANZA COMMUNITY COLLEGE DISTRICT**
OFFICE OF TECHNICAL EDUCATION
12345 El Monte Road
Los Altos Hills, CA 94022

NAME_____

ADDRESS_____

_____ Zip _____
City State

Phone No._____

Please name the Occupational Program that you were enrolled in at Foothill or De Anza College_____

PLEASE ANSWER ALL OF THE FOLLOWING QUESTIONS:

1. What is your present employment status?
   a. _____ Working, full-time (30 hours per week or more)
   b. _____ Working, part-time (less than 30 hours per week)
   c. _____ Not working, looking for a job
   d. _____ Not working, not looking for a job
   e. _____ Military Service

2. Which single statement best describes your present job?
   a. _____ In the occupation for which I prepared while in college
   b. _____ In an occupation related to my college training
   c. _____ In a field not related to my college training
   d. _____ Apprenticeship program (specify)_____
   e. _____ Not employed

3. Are you currently attending college?
   a. _____ No
   b. _____ Yes
   College_____
   Major_____
   Units carried_____

Please rate the following according to your Foothill or De Anza experience

| | | Excellent | Average | Poor |
|---|---|---|---|---|
| 4. | Class instruction | a. ____ | b. ____ | c. ____ |
| 5. | Help from instructor outside of class | a. ____ | b. ____ | c. ____ |
| 6. | Program planning assistance | a. ____ | b. ____ | c. ____ |
| 7. | Vocational information available | a. ____ | b. ____ | c. ____ |
| 8. | General opinion of college | a. ____ | b. ____ | c. ____ |

9. Were you employed prior to taking your work at college?
   a. ____ Yes b. ____ No

10. If yes to 9 above: a. ____ At a lower level?
    b. ____ In the same level?

11. Do you plan to continue your college education to a Bachelor's degree or higher?
    a. ____ Already have Bachelor's degree
    b. ____ Yes, will continue right away
    c. ____ Yes, but later
    d. ____ Probably not
    e. ____ Definitely no

12. Do you think you will return to this or any college for additional training in order to advance on the job?
a. ____ Yes b. ____ No c. ____ Not sure

**PLEASE ANSWER THE FOLLOWING QUESTIONS IF YOU ARE PRESENTLY EMPLOYED:**

13. Who is your current employer?

Name of Company_____

Mailing Address _____

_____ Zip
City State

Name of Supervisor_____

14. Who assisted you in securing the position?
a.____College Placement Office b. ____Instructor c. ____No one
d.____Already employed in current position while attending college
e.Other than above_____

15. How well did your college occupational training prepare you for skills you need on your present job?
a. ____ poorly b. ____ fairly well c. ____ very well

16. Do you feel that your college occupational training was important to you in getting your present job?
a. ____ not at all b. ____ some c. ____ a great deal

17. What is your current rate of pay?
a. _____ $2.00 - 2.99 per hour
b. _____ $3.00 - 3.99 per hour
c. _____ $4.00 - 4.99 per hour
d. _____ $5.00 - 5.99 per hour
e. _____ $6.00 or more per hour

18. Please name the three college courses that were of <u>most</u> help to you in your work.

_____ _____ _____

19. How long did it take you to find your first job after leaving college?
a. _____ I had it before I left college
b. _____ A month or less
c. _____ One to three months
d. _____ More than three months

20. Please name the three college courses (of two units or more) that were of <u>least</u> help in preparing for your job.

_____ _____ _____

21. If not employed in a field related to your occupational training, was your occupational training of value to you?
a. _____ Yes b. _____ No

22. If yes to 21 above, in what way_____

_____

jobs lined up can provide report information and thus be excluded from later mailings for that purpose.

2. To alert noncompletors, institute a procedure requiring Exit Interviews. At the time the student withdraws obtain pertinent information and alert student to possible follow-up requests. Although some students will just disappear, this number can be minimized by consistent collegewide efforts, e.g., announcements in registration packet, college newspaper, bulletin boards, etc., urging students to protect their records by following appropriate withdrawal procedures.

3. To alert others, send letter as soon as nonattendance is determined, explaining importance of feedback information and requesting student to (a) keep college posted as to his address, and (b) respond when contacted.

As in other aspects of the model, individual colleges and individual programs within a college may require different approaches. The above are listed as suggestions to be tried when deemed appropriate, but the principle of preparation of students for follow-up while still in college has been demonstrated to be sound.

## STUDY DESIGN

It is obvious that one particular detailed plan for following noncontinuing students cannot suffice for all students in all programs in all colleges at all times. The following procedures are suggested.

*Select method(s), select or construct instruments.* In most studies at most colleges, mailed questionnaires will probably be the most feasible vehicle for obtaining data from former students. Other possibilities are telephone or in-person interviews, or combinations of any of the three. Following are some suggestions for preparing instruments and conducting a follow-up study by mail:

1. Design the instrument to require the minimum possible time to complete.
2. Use as few words as possible in asking the questions.
3. Use familiar words, don't abbreviate, avoid long expressions.
4. Use two simple questions rather than one complex one.
5. Avoid hints as to desirable or expected answers.
6. Phrase questions to avoid academically or socially acceptable responses.
7. Place easiest to answer questions near the beginning.
8. Sequence questions to conform with respondent's way of thinking.
9. Plan method of tabulating results during questionnaire preparation.
10. Consider using double postcard for brief questionnaire.
11. Observe parallelism and exclusiveness in multiple-choice questions.
12. Make directions brief but complete and set off with distinctive lettering.
13. State a deadline of about ten days after mailing.
14. Don't ask a question unless it clearly relates to the purpose of the study.
15. Indicate endorsement of the questionnaire by someone held in high esteem by the recipient.
16. Try out your questionnaire on a few people before you finalize it.
17. Send questionnaire so it will arrive early in the week.
18. If a second mailing is performed, enclose another questionnaire.
19. Send any second mailings about two weeks after first mailing.

20. Enclose accompanying letter (except in double postcard mailing), briefly explaining the project and motivating the recipient to respond.
21. Enclose a self-addressed, postage-paid envelope.
22. Give prime consideration in designing the questionnaire to motivating its return, secondary consideration to data processing requirements.
23. If deemed necessary, assure respondent that names will not be used in any published reports; however, most researchers agree that anonymity is not critical in response rates and it is advisable to be able to make a second contact with nonrespondents, thus requiring some kind of identification.
24. Use different color questionnaires for groups you want to study separately.

*Prepare time schedule.* After the target list of names is prepared and methods and instruments are decided upon, the study is ready to "go." At this point the study director should prepare a rigid time schedule for the various steps in the study implementation. Deadline dates can be set in accord with the following time estimates:

| *ACTIVITY* | *DAY* |
|---|---|
| a. Mail questionnaire | 1 |
| b. Mail second questionnaire (optional) | 15 |
| c. Telephone non-respondents (optional) | 25-30 |
| d. Collect responses, tally, and/or keypunch | 3-30 |
| e. Analyze data | 30-35 |
| f. Prepare and disseminate reports | 36-40 |

By using such a time schedule, the study can be completed in a maximum of six weeks. Elimination of step b and/or c can reduce the time significantly but at some risk of making generalizations from insufficient findings.

*Collect data.* Among the ways in which follow-up studies differ from other studies is that the data arrives over a period of time, a situation with some obvious disadvantages. However, this spread of data collection over a time period offers the advantage of utilizing a more leisurely tallying procedure. If carefully thought out formats are prepared in advance for recording the data as it arrives, secretarial help can usually keep tallies up to date during slack periods. For this reason, manual data processing may be preferable to electronic data for tallying and analyzing follow-up responses. A generally satisfactory method is to use several blank questionnaires on which to mark tallies. Each blank questionnaire could be marked to identify desired subgroupings. For example, if subgroups are desired for sex (male and female), status (full-time, part-time) and age (under 21, 21-25, over 25), 12 (2x2x3) blank questionnaires should be used. For additional distinctions, different colored pencils can be used. For a larger number of breakdowns, punched cards and electronic data processing equipment are probably advisable.

*Analyze data.* After data collection (including tallying) is completed, the study director (or someone else) must take a good hard look at the data with a view towards answering these questions:

a. What concepts that we hold about our program(s) does the data confirm or deny?

b. What does the data tell us about our program(s) that we didn't already know?
c. What should be done as a result of the answers to questions (a) and (b)?

There are several possible approaches to analyzing the data. Again, the specific purposes of the study, its scope, limitations on time and resources are factors which must be considered. A simple tally might suffice one time, while a sophisticated statistical analysis might be appropriate another time. A thorough analysis in one office may be best at one time, while sending relevant questionnaires to specific program heads for their analysis may be more appropriate at another.

Because highly sophisticated statistical analyses are seldom appropriate, it is not essential that the study director be able to perform such analyses; however, competent statisticians can nearly always be found on a college staff and their consultation is advised before drawing inferences from "close" data that might have major impact upon a program.

*Disseminate findings.* As in other phases of follow-up, dissemination of findings are flexible—but data in a deskdrawer or reports on a shelf are not very useful in evaluating or planning programs. The key point is that persons in position to make or influence program modifications must know the results of the study. For some, formal reports are preferred; for others, brief memoranda; for still others, a simple presentation of the data in tabular or graphical form will best present the message.

*Make appropriate program adjustments.* This final step in the follow-up flowchart is the culmination of the efforts—this is what it's all about. In one sense, this step is not part of the study, it's what should be done as a result of the study. In another sense, it is the study.

# Part IV

## TESTING PROGRAMS

CHAPTER 13

# The Scope of Testing Programs

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The first method of evaluation in formal school situations was oral recitation, but during the last half of the nineteenth century, the trend was toward the use of written tests. The written examination gave teachers a new supplementary evaluation technique. Intelligence tests, introduced by Alfred Binet, followed by general scholastic-aptitude tests, were published, providing teachers with a means of learning the capacities of students. The major aspect of the movement of standardized achievement testing was the development of published tests for measuring achievement and intelligence.

## MEANING AND PURPOSES OF TESTING PROGRAMS

The terms *measurement, evaluation,* and *testing* are frequently used interchangeably. Tests are a form of measurement and are used for evaluation for goal-setting purposes, for diagnostic purposes (to determine how much progress has been made), and for measurement purposes.

*General uses of tests.* A test is a device for measuring or evaluating a student's abilities, aptitudes, achievement, or other characteristics. In evaluating the progress of a student, a value judgment is made concerning his/her progress; and to measure progress is to express it in terms of some standard of measurement.

Tests aid the administration in meeting many of its responsibilities, the instructional staff by instituting homogeneous groupings in class, and the students by directing them to a successful program. Uses to be made of tests by all who are concerned with the study of individuals may be grouped in terms of specific purposes: to diagnose difficulties, to estimate intelligence, to determine aptitudes, and to evaluate performance.

*Diagnostic evaluation.* Alexander and Saylor believe every test may serve as a diagnostic purpose:

> Both the essay and the objective tests can be formulated to give information concerning student difficulties in comprehending questions and directions, in finding information in printed sources, or in interpreting graphic materials. Standardized tests of achievement have diagnostic value—in fact, this is usually

their chief value—in that they provide information, through test analysis, of the kinds of difficulties students have in the subject concerned.[1]

*Grading and motivation.* Tonne and Nanassy state that "testing, which is looked upon as a climax rather than as a phase of the teaching process, is, by its very nature, only a basis for grading and recordkeeping."[2] Tests are prepared, graded, and averaged according to an arbitrary but complicated formula, in order to give each student a grade for the period in question. Tests are frequently given as a means of motivating students. Faunce and Munshaw state:

> Teachers warn their classes that they will be quizzed on the assignment. The implication is that the students had better study hard in order to achieve the highest possible score on the test since this score will affect the mark they receive for the course. Such behavior on the part of the teacher suggests to the students that evaluation is a device which teachers use to make them work harder.[3]

Regardless of the teacher's own personal philosophy about evaluation and assignment of grades, the fact remains that schools require grades and there must be some logical bases for determining them.

*Other specific reasons for evaluation.* The most common evaluation devices are tests (either formal or informal), student projects, and class recitation. Specifically, evaluation is needed, in addition to diagnoses, grading, and motivation: to serve as a basis for promoting students, to determine the effectiveness of and to improve instruction, to discover abilities and interests to serve as the basis for counseling, to improve courses of study and instructional materials, to learn the extent to which objectives are being achieved, and to use as a basis for ability grouping.

## FORMAL TESTING

Tests are designed in all shapes and forms, and authors of books and journal articles do not all agree on what constitutes a formal and what constitutes an informal test. Predictive tests include intelligence tests, aptitude tests, and interest inventories. Achievement tests include subject, diagnostic, placement, employment, and certification tests. Scholastic aptitude tests emphasize reading, vocabulary, and understanding; achievement tests measure proficiency in defined areas; interest tests reveal individual interest patterns; personal and social adjustment tests provide personal characteristics; and measurements of special abilities and aptitudes reveal artistic, musical, and clerical characteristics.

Although business teachers should be knowledgeable about the different types of tests, no attempt is made here to give a comprehensive

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[1] Alexander, William M., and Saylor, J. Galen. *Modern Secondary Education.* New York: Rinehart & Co., 1959. pp. 642-45.

[2] Tonne, Herbert A., and Nanassy, Louis C. *Principles of Business Education.* Fourth edition. New York: Gregg Division/McGraw-Hill Book Co., 1970. p. 222.

[3] Faunce, Roland C., and Munshaw, Carroll L. *Teaching and Learning in Secondary Schools.* Belmont, Cal.: Wadsworth Publishing Co., 1965. p. 328.

treatment. However, some misconceptions about aptitude, intelligence, and achievement tests will be examined.

*Aptitude, intelligence, and achievement tests.* Which is more helpful—an aptitude test or an achievement test? A general mental ability test or a differential aptitude battery? There are purposes for which each kind of test is superior, there are circumstances in which all are useful, and there are conditions when any one of these types may be pressed into service to yield information ordinarily obtained from another type of test. What are these purposes, circumstances, and conditions? When should an achievement test be used rather than an intelligence test or an aptitude test? What advantages do multiple-score aptitude batteries have over single-score intelligence tests?

BASIC CHARACTERISTICS. An achievement test measures what the examinee has learned. But an intelligence test also measures what the examinee has learned, and so does an aptitude test. So far, no difference is revealed. Yet three of the traditional categories into which tests are classified are intelligence, aptitude, and achievement. These very handy categories permit publishers to divide their catalogs into logical segments and provide textbook authors with convenient chapter headings. Unfortunately, the categories represent so much oversimplification as to cause confusion about what is being measured. What all three kinds of tests measure is what the subject has learned. The ability to answer a proverbs item is no more a part of the examinee's heredity than is the ability to respond to an item in a mechanical comprehension test or in a social studies test. All are learned behavior.

Moreover, all are intelligent behavior. It takes intelligence to supply the missing number in a number series problem. It also requires intelligence to figure out which pulley will be more efficient or to remember which president proposed an inter-American doctrine. An intelligence test, then, measures intelligent behavior, and an achievement test measures intelligent behavior.

Finally, all three types of tests measure probability of future learning or performance, which generally means "aptitude." In business and industry, the chances that an employee will profit from training or will perform new duties capably may be predicted by scores on an intelligence test, by scores on one or more specific aptitude tests, or by some measure of the degree of skill the employee already possesses. Similarly, test users in the schools know that an intelligence test is usually a good instrument for predicting English grades, a social studies test is often helpful for prediction of future grades in social studies, and a mechanical comprehension test is likely to be useful in predicting success for scientific or technical courses. So intelligence tests are aptitude tests, achievement tests are aptitude tests, and aptitude tests are aptitude tests.

CONTENT—WHAT THE TEST COVERS. On what basis are the types to be differentiated? One possible basis is that of content. Quite often by looking at the subject matter of a test, it can be classified as achievement or intelligence or aptitude. But content is not a sure guide by any means.

*Specifically, students are taught to multiply (x-y) by (x). If they demonstrate* that they can perform this operation correctly, this item can be accepted as an achievement measure. Next, without specific formal instruction, they are asked to multiply (p=q) by (p-q), and again provide the correct answer. Is this achievement? The mathematics teacher would say it is. Is it aptitude? Certainly the ability to perceive the analogy between the taught and untaught algebraic problems is indicative of future learning ability in algebra. Is it intelligence? The demonstrated ability to generalize is clearly symtomatic of intelligence.

The same point can be made with regard to entire subtests. In the *Metropolitan Achievement* series there is a spelling test; one of the *Differential Aptitude Tests* is also a test called Spelling. Tests of arithmetic comprehension can be found in most achievement batteries; one of the subtests in each of the *Wechsler Intelligence Scales* measures arithmetic comprehension. What does all this mean? Are the authors of these tests confused, or is the classification system less neat and simple than it appears to be on the surface?

The classification system is obviously at fault. The teacher who has taught students how to solve arithmetic problems is perfectly justified in claiming that the students' performance on tests in these abilities represents achievement—both for the teacher and the students. At the same time, the learning of the skills and appreciations by the students is evidence of intelligence. Furthermore, the possession of skills and of the ability to learn demonstrates the possession of aptitude for further learning in those same school subjects, and probably in other subjects as well. For example, scores on the DAT Spelling Test provide excellent prediction of success in learning stenography.

PROCESS—WHAT THE EXAMINEE HAS TO DO. It would appear, then, that test content is not entirely adequate to discriminate among intelligence, achievement, and aptitude testing. Can process be used to discriminate among them? Is achievement measured when the subject is tested for recall of what has been taught, and what intelligence is shown in the ability to generalize from facts?

Every modern educator and every modern test constructor would reject such classification outright. Rare is the teacher who will admit his/her students are merely memorizing facts; rare is the curriculum that is not aimed at developing the ability to generalize, to apply learned principles in new situations. Furthermore, inspection of the items in some of the most highly regarded intelligence tests will reveal many items which are as direct questions of fact as any to be found in the least imaginative achievement tests. Processes of recognition, recall, and rote repetition may be distinguishable from processes of generalization, appreciation, and problem solving—but apparently they are not satisfactory for distinguishing between intelligence and achievement.

FUNCTION—HOW THE TEST RESULTS ARE USED. What is to be accomplished with test scores? How are the test results to be used? What inferences are to be drawn concerning the examinee? If a test's function is to record present or past accomplishment, what is measured may be called achievement. If

inferences are made concerning future learning, what is measured is thought of as aptitude. One kind of aptitude test, usually some combination of verbal and numerical and/or abstract reasoning measures, is sometimes called an intelligence test; more properly, in educational settings, it is called a scholastic aptitude test.

WHICH KINDS OF TESTS ARE MOST HELPFUL? The information obtained from group tests of general intelligence, so-called, is often valuable. The information can be misinterpreted, and perhaps the use of the word "intelligence" predisposes somewhat to misinterpretation; but any test score can be misinterpreted. The issue is really whether scholastic aptitude or general mental ability tests provide enough information, and here one can only say "enough for what?" For some important decisions, and at some educational levels, the information is probably adequate. For other decisions, and at other levels, the additional information provided by differential ability tests is needed.

*Disadvantages of standardized tests.* Standardized tests, which are scientifically developed with national norms, allow a teacher to compare students with a larger group of students and locate the percentile rank for each student. To have a test standardized is an expensive and time-consuming operation. According to Richard L. Sarlore, "the most unfortunate consequence of standardized testing is that creative nature, talent, and interests are easily overlooked . . . No one testing approach is considered suitable for all students."[4]

Criticism of standardized tests comes from civil rights leaders, educators, critics of education, sociologists, psychologists, philosophers, politicians, journalists, and public administrators, according to Holmen and Docter.[5] Standardized tests fail to consider differences in cultural background and individual attributes; predict imperfectly—mislead the test user and result in harm to the testee; and may be assumed to measure innate characteristics, influencing individuals to conceive persons in categorical terms—"mentally retarded" or "gifted." Test scores may be rigidly interpreted (results in assignment of student to ability grouping based on measures which may be indefensible)—and may influence teacher expectations regarding students' potential.

ACCURACY OF TEST SCORES. Stanley says a test should yield consistent results, pertinent to specific purpose the tester has in mind, without too much trouble and cost.

> . . . Test scores must be *reliable* and *valid* enough for the tasks at hand, and they must be *usable*—i.e., obtained fairly readily without undue upset to the curriculum and budget. Reliability is consistency or stability of measurement. Validity is usefulness for a given purpose, especially for predicting an outcome. Usability is practicality.[6]

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[4]Sarlore, Richard L. "How Open Schools View Standardized Testing." *Education Digest*, September 1975.

[5]Holmen, Milton G., and Docter, Richard F. "Criticisms of Standardized Testing." *Education Digest*, April 1974.

[6]Stanley, Julian C. *Measurement in Today's Schools.* Fourth edition. Englewood Cliffs, N.J.: Prentice-Hall, 1964. pp. 150-51.

Every user of test scores knows that no test is perfectly accurate. The score on a test is determined principally by the ability of knowledge of the person who takes it, but the score is also affected by the inaccuracy of the test itself. It would be helpful if one could know definitely whether a test score is higher or lower than it should be, and by how much. Unfortunately, no one has ever figured out a practical way to determine the precise amount of error in an individual case. Statistics have been developed, however, for estimating the margin of allowable error in test scores.

COMPARABILITY VERSUS EQUIVALENCE. Two of the common words in the testing field that are surrounded by confusion are "comparable" and "equivalent." Two test scores are equivalent if either can properly be substituted for the other. Both the trait being measured and the means of measurement must correspond. Two scores may be comparable, on the other hand, yet reflect very dissimilar abilities. In fact, the scores may be numerically quite different—may even be expressed in different units—and still be comparable. Comparable scores represent equal rank in a given population—they imply nothing concerning what is being measured. Equivalent scores represent similarity of what is being measured—the more complete the equivalence, the greater the likeness of measurement. The test user would do well to keep these distinctions in mind; to avoid being confused into accepting comparable scores as denoting equivalence of measurement; to insist on close approximations to complete equivalence in alternate forms; and to recognize that in substituting one test for another rough equivalence may be preferred to more precise equivalence if improved validity is being sought.

*Published tests.* Various types of published examinations for measuring a student's ability are available to business teachers. However, a published test is not synonymous with a standardized test and is not always a good test. Published tests should be used as a guide only and selected with caution. Also, printed tests are generally copyrighted and should not be used verbatim without the publisher's permission. Objective tests that have been developed to accompany textbooks are helpful, especially to the beginning teacher. When the textbooks are adopted, permission to use the accompanying tests is usually automatic, and many publishers furnish tests at little or no cost to the user. When published tests are not available for the selected textbook, the teacher can obtain sample copies from other publishers.

Printed achievement tests in all business subjects are available, and printed aptitude tests and placement tests are available in a few business subjects. Recent textbooks on the subject of tests and measurement would be good sources for discovering lists of publishers of tests and the kinds of published tests that are available.

*Teacher-made tests.* The teaching-learning process consists of three basic facets: establishing objectives, engaging in goal-related activities, and evaluating to what extent goals have been achieved. Among the specific kinds of evaluation devices, the following are the most frequently used:

1. Written work: unit papers, short reports, chalkboard work, daily assignments.

2. Oral work: committee reports, class discussions, debates, brief individual oral reports, teacher-student conferences.

3. Examinations: unit examinations, mid-term tests, short quizzes, oral examinations (class discussions and individual tests), written essay and objective tests.

4. Miscellaneous: projects and case studies.

The usefulness of good teacher-prepared tests is so extensive that it is very important for every teacher to be able to construct them. A good test should emphasize topics related to the perspective of the total course, should be based upon material relevant to carefully planned objectives, should stress either material covered in class or material covered in specified readings, should be concerned with test administration, and should have discriminitive ability. Rich believes these criteria provide a reasonable checklist which any teacher could profitably use for self-examination and instruction in test development, construction, coverage, and administration.[7]

Green has suggested several principles of general test construction that should be followed to insure a high-quality measuring instrument:

1. The test should be long enough to be valid and reliable but short enough to be usable.
2. A measurement test should be a power test, wherein the first few items are simple enough for all students to answer.
3. The test should be designed in such a way that reading rate and comprehension do not unduly influence the test scores.
4. A test should generally consist of no more than two or three types of items, and all the items of one type should be included in one section.
5. The test should be appropriate to the ability and age level of the students.[8]

ESSAY TESTS. Broadly speaking, essay questions can be categorized into the following types:

1. Recall of information
2. Comparison of information
3. Cause-and-effect relationships
4. Definition or explanation
5. Evaluation
6. Discussion—for or against
7. Problem solving.

The essay test allows students to express their own thoughts in writing. Travers indicates that the essay test permits students to demonstrate such elements as organization of a subject, grasp of a subject, and its application to a particular problem.[9] Although the essay test is relatively easy to construct, it is of questionable validity because it samples only a limited amount of material, favors the articulate student, and is extremely difficult and

[7]Rich, John H. "That Was a Good Test." *Balance Sheet*, October 1971. p. 62.

[8]Green, John A. *Teacher-made Tests*. New York: Harper & Row, 1963. pp. 17-22.

[9]Travers, John F. *Fundamentals of Educational Psychology*. Scranton, Pa.: International Textbook Co., 1972. pp. 408-09, 421.

time-consuming to grade. Also, teachers have a tendency to grade spelling, grammar, and the student's ability to express himself/herself clearly rather than content. The question arises, "Should or should not the teacher grade spelling, grammar, and coherency in grading essay tests?" Other specific advantages of the essay tests include: simplicity of administering; emphasis on wholes rather than parts; ability of students to recall, organize, reorganize, and apply knowledge.

OBJECTIVE TESTS. The objective test is useful in determining whether a student knows the difference between two related but different concepts. The most common forms of short-answer or objective tests include true-false questions, multiple-choice questions, matching questions, and completion questions. Teachers rely extensively on the recognition type questions probably because of the relative ease with which they can be constructed; however, to prepare objective tests well requires skill, time, and effort.

No attempt is made here to describe the relative merits of each of the objective tests; however, the multiple-choice test appears to be replacing other forms of short-answer types because of its adaptability. The multiple-choice test can be used to measure simple processes (memory for facts) and also more complex processes that require reasoning and problem-solving abilities.

The following general principles that should be adhered to in preparing the various kinds of short-answer test questions are listed by Nolan, Hayden, and Malsbary:[10]

**True-False Questions**

1. Avoid the use of negatives. They serve no useful purpose and only tend to confuse the student.
2. Select statements that are definitely true or definitely false.
3. Use such words as "always" and "never" sparingly in true-false questions. There are few statements that are always true or that are never true; consequently, such words tend to give clues to the correct answer.
4. List true-false statements in chance order rather than in a regular sequence.
5. Use fairly short sentences. Students have learned that long sentences are nearly always true.
6. Use approximately the same number of true items as false items so as not to indicate a bias in one direction.
7. Avoid the use of statements from the textbook. This tends to cause students to memorize the wording of the test rather than to understand the concept or thought expressed.
8. Indicate in the instructions to the student the method that he is to use to record his response, such as T-F, yes-no, plus (+) or minus (-). A variation of the basic true-false test is one that requires the student to correct each item he marks "false." In any event the plan used to indicate the response does not change the fundamental nature of the question.

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[10]Nolan, C. A., Hayden, Carlos K., and Malsbary, Dean R. *Principles and Problems of Business Education*. Third edition. Cincinnati: South-Western Publishing Co., 1967. pp. 410-16.

### Multiple-Choice Questions

1. Place the correct word or phrase in a relatively different position among the possible choices in each question.
2. Have at least four items from which the student is to select the correct response. Fewer than four items make a choice too easy.
3. State the item in positive form, because "no's" and "not's" are likely to be overlooked by the student, or such negative words tend to confuse him.
4. Be sure that all items among the possible choices are plausible. If any of the items lacks plausibility, it will be obviously incorrect, and the choice of the correct item will be made too easy.
5. See that all responses are in agreement as to grammatical form. It should be possible to use any one of the alternatives to complete the introductory part of the items so as to avoid any clues to the correct answer.
6. Make the question or statement free of complex sentence structure and as short as possible.
7. Construct the question so that the student is required to indicate his response by drawing a circle around the number or letter of the intended response or by writing the number or letter of the intended response in the special answer column provided. This will facilitate scoring.
8. Make instructions clear and concise.

### Matching Questions

1. Use at least ten pairs of items and not more than fifteen. A fairly long list of items requires the student to use judgment as well as memory in matching the pairs. Less than ten pairs encourage guessing; with more than fifteen, the exercise becomes too time consuming.
2. Arrange alphabetically the items in the first column. This aids the student in locating items to match those in the second column.
3. Choose the items so that each item in the second column will match only one item in the first column. If an item in the second column matches more than one item in the first column, objectivity is lacking, the student becomes confused, and scoring is difficult.
4. If possible, have the response list contain more items than the other list.
5. Material in any one exercise should be similar. For example, an exercise could be developed on word usage or one could be developed on grammar, but the items should not be mixed. Each exercise should include items which are closely related.
6. A matching exercise should be complete on one page. Otherwise, solving the exercise is very time consuming.
7. Items within each column should be in agreement as to grammatical form so that there will be no clues as to matching pairs. Each item should be so constructed grammatically that it will match with any item in the other column.
8. Instructions must be clear and concise. An illustration should be included to make sure the student understands how to select and record his answers.

### Completion Questions

1. Try to write the item in such a way that there is only one correct answer.

2. Leave the number of blanks that the response demands, but try not to call forth a response of more than three words (thus three blanks).
3. Place the blank space at the end of the statement, thus making it less confusing to the student and easier for the examiner to score.
4. Use statements that call for key words. The desired response should be important or the question loses its significance.
5. Textbook statements should be avoided. Such statements are often without meaning when they are removed from context and the practice places a premium on memorization rather than understanding.
6. Words such as "a" or "an" should not immediately precede a blank inasmuch as they tend to give clues to the correct response. These are known as specific determiners.
7. All blanks should be of the same length so as not to give a clue to the answer.
8. Instructions should be clear and concise.

*Criterion-referenced testing.* A current trend in testing appears to be a greater utilization of processes (observation) and products (results of observation) rather than the use of objective tests. Measurement and instructional specialists have been distinguishing between norm-referenced and criterion-referenced approaches to measurement. Popham and Husek define these two terms as follows:

> More traditionally, a norm-referenced measure is used to identify an individual's performance in relation to the performance to others on the same measure. A criterion-referenced test is used to identify an individual's status with respect to an established standard performance.
>
> . . . Other than adding new terms to the technical lexicon, the two constructs have made little difference in measurement practice.[11]

Changes in teaching techniques have a direct effect on test procedures. In the traditional method, instructional sequence and pace are held constant for all students (usually geared toward the average students), but in programmed instruction, the pace is set by the individual student. Coulson and Cogswell state that the sequence also is individualized if the program provides "branching" capabilities:

> . . . Performance criteria for successful program completion are identical for all students. Thus, in programmed instruction a criterion test is a go/no-go test determining whether a student is ready to graduate or to progress to the next study unit; such a test is not used to rank students on some achievement scale.[12]

Although current literature indicates a trend toward the use of criterion-referenced measurement, Robert L. Ebel poses some major limitations:

> Criterion-referenced measurement may be practical in those few areas of achievement which focus on cultivation of a high degree of skill in the exercise of a limited number of abilities. In areas where the emphasis is on knowledge

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[11] Popham, W. James, and Husek, T. R. "Implications of Criterion-Referenced Measurement." *Journal of Education Measurement*, Spring 1969.

[12] Coulson, J. E., and Cogswell, J. F. "Effects of Individualized Instruction on Testing." *Journal of Education Measurement*, June 1965. pp. 59-64.

and understanding, the effective use of criterion-referenced measurements seems much less likely.[13]

Ebel summarizes the shortcomings of criterion-referenced measurement as follows: "They do not tell us all we need to know about achievement; they are difficult to obtain on any sound basis; and they are necessary for only a small fraction of important educational achievements."

*Computer-assisted instruction/testing.* Computer-assisted instruction has produced excellent results in learning, and computer-managed instruction has also been used in the form of self-paced computer testing. Under the CAI program, students may be given pretests the first week of the semester; if they pass, more advanced courses may be open to them. Data may be retrieved concerning any student, the entire class, any question, group of questions, or examination at any time throughout the semester. At the end of the semester all data on all students, questions, and exams may be printed rapidly on-line.

The CAI program provides immediate feedback after each question, such as "good—you are correct" or "no, you missed—go back to objective 6 and review." At the end of a test, the computer gives students their scores on all tests they have taken and lists the objectives missed. Questions are taken randomly from a question bank arranged by objective number; answer choices are also arranged randomly. Since the advent of the cathode ray tube interface, it is unnecessary to collect the quiz questions, because all questions and answers disappear from the tube. Previously, the computer printouts had to be collected to keep the questions from becoming public.

Some systems offer capabilities of adding computer-assisted instruction techniques to an existing data base/data communications system. By using such a program, a user can provide realtime training techniques through the use of existing remote terminals and in conjunction with current transactional processing applications.

The course contents and techniques of instruction are normally determined by someone familiar with the training process, who may be assisted by a specialist in the subject matter. The learning environment and requirements for complementary lecture or hands-on training are considered, and the course objectives determined: These are the tasks that the student will be expected to accomplish upon completion of the course (define, list, explain, do, etc.)

One possible format for the organization of the instructional materials is as follows:

1. The *introduction* tells students what they are expected to do, gives an overview of the course contents, states the prerequisites, and may give some instruction on equipment operation.
2. Optional *pretests* can be used to assess students' capabilities and will permit them to bypass portions of the course that they already know. The author can branch to or from any course material, or branch directly to the course *posttest* if satisfied with their capabilities.

[13]Ebel, Robert L. "Criterion-Referenced Measurements: Limitations." *School Review*, February 1971. pp. 282-87.

3. The actual *instructional* material may be organized in small sections, each containing a short summary. The instructional material may be leading, allow deductive reasoning, or any combination of other techniques.
4. A *review* summarizes part or all of what has been presented.
5. The *posttest* samples what has been taught by having the students apply what they have learned to actual situations. After evaluation, students can repeat, receive additional information, or continue to other sections or courses.
6. The *summary* restates the content of the material that was presented and reminds students what they should be able to do.

Two structures are possible when including a series of criterion questions (pretest): First, tutorial information is immediately presented to a student when he/she misses a question. Second, the missed questions can serve as a guide for delayed (after completion of all pretest questions) presentation of tutorial information. All the tutorial units are then presented sequentially based upon incorrect answers to the pretest questions. The author/instructor may even leave the choice of taking a pretest up to the student. The selection of which posttest questions are to be presented is based upon which tutorial units were previously presented. After the posttest is graded, remedial units can be taken for the missed posttest questions.

A session also may consist only of tutorial units, or tutorial units and a posttest. In the latter case, all posttest questions will be presented, missed questions causing remedial information to be presented if included.

## INFORMAL EVALUATION

Among the informal techniques that can be used to evaluate students are observation, interviewing, problems and performance, group activities (including role playing), and class discussions. Informal evaluation techniques may be used for guidance purposes as well as for making judgments about students' progress.

*Observation.* Students' attitudes, problem-solving abilities, and performance can be observed in the classroom and in school club activities. For example, in the typewriting laboratory, the teacher may observe technique or application problems, offer suggestions for improvement, and check later to see if the student is performing satisfactorily or is at least making progress. Teachers may observe student behavior in a number of other situations, as listed below:

1. Presenting and discussing case studies in business law
2. Preparing and presenting sales demonstrations in distributive education
3. Completing and submitting a practice set in bookkeeping
4. Preparing and making a special report in general business
5. Working on committees and visiting the business community
6. Demonstrating a telephone conversation or playing a role.[14]

[14]Nolan, Hayden, Malsbary, *op. cit.*, p. 394.

Observations may be recorded several ways, as listed by Ruth Stang:

1. As dated anecdotal records, giving the name of the observer as well as the name of the student, enough of the background of the incident to aid in the interpretation, and an objective description of the incident
2. As a behavior diary records, which are a series of dated anecdotal records
3. As a behavior summary of observation over a period of time
4. As ratings on a behavior rating or attitude scale.[15]

*Interviewing.* Interviewing is especially useful in getting information from students with respect to their attitude toward themselves, their relations with others, and their problem-solving abilities. Informal interviews with students may take place during class sessions, or when time permits, in the teacher's office. Confidential discussions, of course, should always take place in privacy. The degree of success with this type of evaluation depends greatly upon the rapport teachers have been able to establish with their students.

*Creative testing.* Creative testing is still another informal method by which the student's performance can be measured, and if designed with imagination can become a powerful motivational tool. Creative testing offers alternative methods by which the student's performance may be measured. For example, in a general business class, a test on inflation might be in the form of a short story, a poem, a picture with accompanying essay, or a personal interview. A second part of the test might focus on measuring vocabulary. This technique would allow the teacher the latitude to measure knowledge with a variety of interest.

Variations of creative testing can be used on an individual basis or in group activities, including role playing; in oral reports; and class discussions. Videotape equipment will become increasingly more available to schools, and taped sessions will use action and sound to make testing more realistic and interesting.

## THE FUTURE

What are the foreseeable changes in testing in the future? Some of the predictions made concerning trends for the 1980's are already a reality in the mid-1970's. For example, Alvin C. Eurich predicted that group paper-and-pencil tests would yield to individual, self-taken tests—computer programs.[16] He said tests in the future would likely be used more to help students make their own decisions and less to help counselors, teachers, and school administrators make decisions about them; and that individuals would use tests as a means of exploring and assessing their strengths and abilities rather than being compared with others on a few conventionally measured abilities.

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[15]Stang, Ruth. "Development of Informal Evaluation Techniques." *Evaluation of Pupil Progress in Business Education.* Seventeenth American Business Education Yearbook. Somerville, N.J.: Somerset Press, 1960. p. 119.

[16]Eurich, Alvin C., editor. *High School 1980/The Shape of the Future in American Secondary Education.* New York: Pitman Publishing Corp., 1970. pp. 221-22.

The trend toward criterion-referenced measurement and computer-assisted instruction/testing and test materials presented by television and tape recordings will continue. Future trends predicted by Frederick G. Brown include the following:

1. Increasing use of tests and increased questioning of the use of tests. The increase will be due to a larger labor force and increase in the number of students in all types of educational programs. Emphasis on human rights will cause negative reactions to tests and other methods which attempt to classify persons objectively.
2. Relative increase in the use of achievement tests and decrease in the use of aptitude tests; less use of personality measures.
3. Reconceptualization of some of the basic ideas in psychological testing and increasing concern with social consequences of testing.[17]

[17] Brown, Frederick G. *Principles of Educational Psychological Testing*. Hinsdale, Ill.: Dryden Press, 1970. pp. 434-36.

CHAPTER 14

# Construction of Evaluation Devices and Interpreting Results—Skill Subjects

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Evaluation is most successful when objectives are clearly stated in advance of a learning experience. Evaluation should be undertaken for the purpose of assessing student attainment of specific objectives and judging student progress toward achievement of objectives. Many evaluation instruments are available, and all business teachers must have an opportunity to select the ones appropriate to their program, teaching situation, and students.

Evaluation instruments permit teachers to make a judgment about student progress in terms of a standard. Classroom standards must reflect levels of performance considered acceptable for entry-level employment. Therefore, student performance standards should relate to those established by the business community for entry-level employees. Each student must understand the learning outcomes that satisfy a particular standard. Grades assigned to measure student achievement of a specific standard of performance will be more meaningful if classroom standards are representative of on-the-job performance standards.

Evaluation is a complex and continuous process that involves the cooperation and participation of teachers, learners, and employers. Instruments must be prepared to evaluate achievement at the various stages of learning—beginning, intermediate, and advanced. It is the teacher's responsibility to guide a student through each stage of learning and to evaluate whether or not the student attained the degree of performance needed or desired. The key questions in the evaluation process are: Has a student reached a level of performance necessary for success on the job? Is the evaluation instrument suitable for measuring successful performance?

## CHARACTERISTICS OF EFFECTIVE EVALUATION DEVICES

Evaluation techniques often influence the attitude of students toward learning. Evaluation procedures should challenge students to improve and to correct deficiencies; however, evaluation can create considerable student anxiety because teachers do not evaluate properly. Well-designed evaluation instruments will identify the basic strengths and weaknesses in student performance. The results of evaluation should not be used primarily to assign grades but should also provide students with an opportunity for better achievement. The fear of failure impedes striving for achievement

when grading becomes the primary purpose of evaluation. Following are some factors to be considered in constructing instruments for evaluation.

*Defining learning objectives.* All evaluation instruments must be constructed in terms of clearly defined objectives, understood by both the teacher and learner. A teacher must decide what learning objectives students are to achieve well in advance of constructing the evaluation instrument, which should contain everything the teacher wishes to measure without being contaminated with unrelated material. Well-constructed evaluation instruments measure precisely what a student was able to do at the end of a course or unit of instruction.

Objectives in skill courses are largely determined by the teacher, who should know what standards are required in the business world. However, the setting of objectives can be shared by teacher and learner as the learner progresses from the beginning to intermediate to advanced stages of learning. Students should be encouraged to plan, direct, and evaluate their own learning activities, especially at the advanced stages of skill development.

Evaluation instruments must be designed to account for individual needs and differences. Students who have an opportunity to understand exactly what a particular evaluation instrument measures will be more successful in reaching course or occupational objectives. Evaluation is most productive when the process is directed toward assisting students reach individual goals and targets.

*Measuring according to a predetermined standard of performance.* Criterion-referenced evaluation instruments evolve from student learning objectives. A student's performance is measured against predetermined standards of achievement rather than against the performance of other students. The main advantages of a criterion-referenced evaluation system are: (1) a student's performance is compared with predetermined criteria, (2) evaluation will determine if and when the student is ready to proceed, and (3) feedback from evaluation can provide a teacher with information about the effectiveness of instruction. If students are meeting clearly stated objectives, the instructional program can be considered successful. If students are unable to accomplish the objectives, however, the program might need to be reevaluated and redesigned.

Criterion-referenced evaluation should be used for interim as well as terminal objectives. Students can test themselves on interim objectives, and at the conclusion of a unit of instruction, they can pursue formal evaluation to determine successful completion of given terminal objectives. If the terminal performance is not satisfactory, the student must be given additional opportunity to perform at a specific level of proficiency before proceeding to the next unit.

*Considering various stages of skill development.* Skill learning develops from beginning, rather simple task performance to advanced, more complex task performance. Each stage should have its appropriate objectives and standards of achievement. As the student progresses, achievement at each stage should suggest how far along he/she is in the attainment of a final objective. The stage of learning must be considered by teachers before

instructional tasks are assigned, appropriate teaching methods are selected, and evaluative criteria are developed.

Evaluation during the beginning stages of skill development should be to inform the learner of progress being made. In these stages evaluation should be limited to a few clearly understood objectives, and should take place immediately after learning has taken place. Relatively simple material and short learning efforts provide the learner with the greatest opportunity to make significant gains and to show proficiency in performing a specific task.

Evaluation at the intermediate stages of skill development should allow the learner to apply basic knowledge to a task similar to one performed in business. In these stages, students should be permitted to follow a model which shows them what to do. Again, immediate feedback will indicate places where improvement is needed. Tasks evaluated at the point of completion allow for proper selection of the next series of objectives to be reached and the appropriate learning activities to be incorporated.

Evaluation at the advanced stages of skill development involves presenting the learner with experiences that require integration of previously learned knowledge and skill. In these stages learners are not given specific directions as to what to do, but must make decisions based on past experiences and a fundamental understanding of the task to be accomplished. Learning at the advanced stage is largely student directed. At the advanced stage, the student must have an opportunity to use prior learning in the performance of actual or simulated job-related tasks. Evaluation instruments must assess the prerequisite abilities or behavior needed by students preparing for entry-level employment.

*Establishing test validity and reliability.* Evaluation instruments must provide valid data for assessing a student's level of performance and selecting the next series of objectives to be reached. The most valid instrument is one designed from the objectives used in a particular unit of instruction. Evaluation instruments based on specific objectives will tend to serve a definite purpose; for example, the instrument will measure intended learning outcomes. When students see a purpose in evaluation, they will be more willing to accept it as an essential part of the learning process.

Once the purpose of an evaluation instrument is determined, the length of the instrument must be established. How long must the instrument be in order to adequately measure achievement of learning objectives? Sometimes carefully designed short evaluation instruments will measure the extent to which objectives were attained as well as, if not better than, longer instruments. A long instrument tends to tire students and take too long to score. Also, a decision must be made as to what type of test items to use in measuring achievement of specific objectives. Instruments measuring recall of information will be designed differently than those measuring problem-solving ability; however, the teacher must have an idea about the number of questions students can answer in a period of time. Sometimes test items might be varied, since different types of questions get a better sampling of student ability. Some students do well on one type of test and poorly on

another. In skill-type subjects, measurement devices will be performance based with an occasional test on theory and recall of factual and conceptual information. These are factors to consider in providing for test validity.

The accuracy (reliability) of the scores obtained in an evaluation will depend on the procedures followed in constructing the test instrument. Learning objectives must be reflected, and consideration must be given to the type of student the test is written for and the amount of time needed to adequately measure the learning outcomes sought. The problem is one of finding the right device to measure performance objectives. The scope and content of the test should be planned very carefully before it is actually written.

## FUNCTIONS OF EVALUATION DEVICES

Evaluation must be an integral part of the learning process. It implies an ability on the part of the teacher as well as the learner to plan a series of objectives to be mastered in the process of learning and to interpret results based on well-defined standards of achievement. Generally, evaluation has two major purposes: (1) assisting the student in the attainment of an objective and (2) judging a student's progress toward the objective. More specifically, evaluation may be undertaken for the following reasons.

*Determining student progress.* Evaluation devices should measure improvement as well as achievement of an ultimate goal. Learning is not uniform at all stages of skill development; improvement may be relatively easy to measure at certain stages of development and somewhat difficult to measure at others. Students who have a reasonable level of mastery at the beginning of a practice interval may demonstrate little progress later on. Others may show more rapid progress in a practice interval if they start from a lower level of initial skill mastery. It may be desirable to evaluate for two purposes—individual improvement and attainment of ultimate skill standards.

Certain conditions must be observed in the measurement process if real improvement is to be assessed. First, the student must understand the ultimate learning objective, and the outcome of learning must be measured in terms of the objective. Second, the difficulty of the measurement material, the time of the measurement interval, and the time at which measurement occurs should remain fairly constant throughout all evaluations at a particular stage of skill development. Third, as the learner moves from beginning to intermediate to advanced stages of skill, the difficulty of the material and the length of time devoted to evaluation should be increased. All progress should be measured in light of the ultimate objective to be reached. A good evaluation instrument informs a student as to how far along he/she is in the attainment of a final objective.

*Establishing a grade for units of credit.* Grades are used to indicate student achievement; therefore, a teacher has a responsibility to make the grading system as meaningful as possible. Often there are few clues as to why certain grades were assigned. A grading system should not classify

students unless their capabilities and accomplishments have been effectively evaluated.

A grading plan might be developed that considers both improvement and satisfactory levels of achievement. Grading plans must motivate high-ability students to work for greater achievement; low ability students, who work hard and show improvement, should be given recognition for their accomplishments. The need for flexible grading in skill subjects is a necessity because of the wide diversity of student ability. As long as a student's skill and performance are not seriously misrepresented, some recognition for improvement as well as ultimate achievement is desirable.

Grading plans that provide for individual differences encourage student initiative. The payoff is in improved student performance as well as in more satisfaction with grades earned. If the grade obtained is unsatisfactory, the student must be told how to raise it to a satisfactory level. Students are more likely to be motivated to learn when they understand the reasons for a certain grade.

*Diagnosing a learner's strengths and weaknesses.* A good evaluation device can help teachers understand the weaknesses and strengths of their students' learning. Remedial teaching can be made more effective and purposeful when the evaluation instrument pinpoints student strengths and weaknesses. Evaluation instruments should show the degree of student growth in addition to providing a basis for determining and evaluating the full learning potential of the individual.

Evaluation devices should be returned and discussed with students as soon as possible, so that incorrect responses and patterns of learning do not persist. Instruction can be structured to help students attain the right objectives and acquire proper study habits. One of the most important aspects of an evaluation device is the degree to which the instrument directs teaching and learning.

*Guiding students in the direction of job adaptability.* Evaluative techniques should parallel those found in business offices, especially at the advanced stage of learning. Those that incorporate procedures and standards used in business result in fairly clear-cut judgments about the suitability of students for entry-level employment. Incorporation of such standards can help employers reduce costly screening and pre-employment testing.

To accomplish the goal of guiding learning toward job adaptability, the evaluation process must include short teacher-student conferences regarding student goals. Such goals should be individualized with each stage of skill development having objectives that prepare students for eventual employment. Students should understand at each stage of skill development how their learning relates to entry-level employment.

*Assessing the effectiveness of instruction and course standards.* Evaluation instruments can provide the information needed to determine the extent to which students are achieving specific objectives. With a performance-based approach, instruction can be considered successful if students are meeting the instructional objectives. If they are not, a reevaluation of the program should be made.

Effective programs of instruction prepare students to meet business standards as closely as possible under classroom conditions, and evaluation procedures should encourage students to reach those standards. They represent something tangible and obtainable that rewards students for their learning effort.

## EVALUATION PROCEDURES

Procedures used in the evaluation process vary with the nature of the subject matter, the stage of learning, and the level of performance to be achieved, but they all should direct teaching and learning into desirable channels resulting in the accomplishment of most objectives. The type of evaluation procedure selected should measure as precisely and consistently as possible various student objectives.

*Self and group evaluation.* Students should be encouraged to plan, direct, and evaluate their own learning activities whenever possible. Self-evaluation should motivate students and help them set goals. In doing so, a good evaluation system should work for and with, not against, the student. Students should be given opportunities to measure their performance before teacher evaluation. Evaluation is often a time for frustration and concern because students have not been given sufficient opportunity to reinforce and refine learnings. Self-evaluation provides opportunities for the student to demonstrate improvement before formal evaluation by the teacher.

A student can usually progress to a higher degree of mastery when self-evaluation precedes formal, terminal evaluation by a teacher. Self-evaluation helps the student organize the essential meanings of the subject matter covered and review points not so firmly understood. Most importantly, students should evaluate the quality of their own work since well-trained office employees are expected to evaluate the quality of work produced. Training in self-evaluation should be an end goal in acquiring job competence, but it must begin in the very early stages of a skill program to reach the end goal.

Groups or committees are often formed to assist in evaluating behavior that is not easily measured by objective instruments, because judgments about an individual's attitudes and personal traits in social settings can rarely be made with objective instruments. Therefore, the responsibility for making a judgment about an individual's performance is shared in order to obtain a consensus of opinion. Such procedures simulate the real world. In addition, groups are often used for evaluating student papers. Grading or proofreading committees can relieve the teacher of much paperwork; however, they must not substitute for a teacher's personal estimate of the student. The teacher has ultimate responsibility for all evaluation.

*Observation.* Checklists, which are used by teachers to evaluate some forms of behavior, help structure the observation process. After students have developed some degree of skill, checklists can be used for self-rating or self-evaluation. Checklists and rating scales are particularly useful when identifying and measuring certain desirable traits and attitudes needed for

occupational competence. Changes in behavioral traits and attitudes can be verified by continued observations of the same individual in different situations. Students may be rated against a set of written criteria or ranked with other students.

As an alternative to rating scales and checklists, anecdotal records are used to record behavior over a period of time. Such records give background information on incidents or situations reflecting attainment of desired behavior.

*Teacher-student conferences.* Purposeful conferences inform the learner of the achievement of individual objectives and new objectives to be accomplished in future learning. During the early or introductory phases of skill learning, teachers rely primarily on observations of students at work. Short teacher-student conferences about a student's developing techniques can help a student to quickly understand what he/she has done, both in quality and speed, so that the next learning effort can be properly accomplished. Teachers who show a personal interest in their students will schedule conferences throughout the learning process.

*Formal tests.* All testing should be for a specific purpose. Tests should measure achievement of clearly defined objectives. Teachers should test for meaningful knowledge by designing testing material of the same kind, difficulty, and length as the material used in skill development. Testing is most successful when it occurs at the moment the learning effort has been completed.

Various tests are used to determine when growth is adequate and desirable for predetermined objectives. A performance test can measure mastery and application of a skill. Diagnostic tests can determine specific weaknesses as a basis for remedial instruction. Pretests give information about previous knowledge or skill possessed.

Teacher-prepared tests are based on the objectives covered in a unit of instruction. Such tests should be constructed from an outline of topics studied in the unit, because the outline will help a teacher decide on the type of test items to use and the length of the test. Tests must be written to adequately measure behavior of importance; therefore, test items should represent significant work covered within the unit. The test items should be written in a clear and unambiguous style and in a vocabulary consistent with the language ability of the students being tested.

Test questions should be arranged in an appealing format, with the easy items presented first and the more difficult items near the end. In order to reveal weaknesses in test construction, a teacher should take the test first. This also provides information about the time required to administer and score the test. Many types of skill tests can be checked by the student before submission to the teacher for formal evaluation and grading.

Tests should be returned to students as quickly as possible after testing, and an explanation about the manner in which the test was rated should be given. The test should be used to diagnose student weaknesses in skill or knowledge. Group instruction can be used where errors were widespread, but individual students may need special instruction. Test questions on

which many students did poorly should be analyzed to determine if the questions or the instructional techniques need improvement.

Too frequent use of tests results in lower student motivation and diminishing returns. A test should be given only when it serves a needed and useful purpose. Realistic tests, those which approximate situations to be experienced in real life, can also be effective learning devices. After the initial stages of learning, the best tests require student thought and problem-solving ability rather than mere recall of information.

## INTERPRETING RESULTS IN SKILL-TYPE SUBJECTS

The adequacy of an evaluation instrument reflects the degree to which results sufficiently measure student performance. The results or scores obtained on any evaluation instrument should clearly differentiate the superior student from the average and the average from the inferior. Also, when an evaluation instrument is used by different examiners, comparable results should be secured in the measurement of the same or nearly identical behavior.

*Evaluation systems.* Any system utilized in the process of reporting the results of evaluation must be manageable and understandable to both teacher and learner. No system designed to show the results of evaluation should be so complex as to delay immediate confirmation of learning. The simpler the procedures followed in the interpretation of results, the fewer the problems in communicating to students the extent to which they have progressed in skill development. Following are some plans used to report results and to establish a grade.

POINTS. Evaluation made on a point basis considers the importance of tasks completed and the quality of work accomplished within a given period of time. A scale must be prepared each grading period to assign grades for the accumulated points that reflect performance evaluated. A major advantage of the point system is that the teacher does not have to follow a mathematical procedure of assigning a percentage of a grade for one factor or another. A built-in weight factor can be achieved by assigning a smaller number of points for some activities and a greater number of points for others.

VARIABLE CREDITS. Evaluation in a variable credit system is predicated on individualized instruction, where students are allowed to progress at their own speed. Grades and units of credit are assigned depending upon the quality and quantity of work produced. The more learning objectives a student is able to achieve within minimal performance standards, the greater the number of accumulated units of credit. Students participating in a variable credit program must be told in advance the standards that must be achieved and the units of credit that may be earned for each learning activity accomplished. Variable credit systems can be difficult to manage; however, the extra teacher effort results in students being rewarded for achievement of specific learning objectives rather than for time spent in class.

PASS/FAIL. The pass/fail system can lessen some of the anxiety expressed by students who are overly concerned about the difficulty of a particular

skill course. Pass/fail incentives rely on an individual's own motivation and self-direction. Students must develop responsibility for meeting minimal course objectives and standards, and each student is afforded the opportunity to accomplish as many objectives as possible. Pass/fail systems eliminate the letter grades which many students are more concerned with than actual learning.

CONTRACTS. The student and teacher agree to a series of performance goals or competencies that must be achieved for a particular grade. If a student meets all the goals with an acceptable level of performance, an appropriate grade is assigned. Contractual grade agreements between teacher and student provide for individual progression within a skill course. Student motivation and incentive may be enhanced when the student is given a voice in the determination of learning goals.

MAILABILITY. Grading for mailability of the completed assignment is based on the belief that classroom standards should reflect as closely as possible job standards. In advanced skill classes, holding students to office standards might be appropriate. The student should know what criteria is used to judge the mailability of completed work.

PAYROLL METHODS. By emphasizing a "monetary" grade upon completion of assignments, students receive a practical measure of their potential earning capacity. The payroll method rewards students for careful proofreading, budgeting of time, and producing acceptable assignments. The accumulated dollar values assigned to the production of usable work ultimately determines the final grade.

*Devices used to assess student learning in skill subjects.* The results of evaluation determine if and when students are ready to proceed. An evaluation instrument should be designed to show what a student can do. It should be given only when a reasonable increase in skill can be expected; emphasis should be on self-evaluation.

In skill-type subjects, evaluation should be directed toward terminal student performance. Each evaluation period prior to the end of a course must indicate student progress toward the attainment of terminal objectives. Students must be given adequate opportunity to demonstrate terminal proficiency and to provide the teacher with solid evidence of growth.

Informal evaluation, primarily observations of students at work, can be an effective means of guiding learning, especially if accompanied by short teacher-student conferences. However, the total element of subjectivity in most informal evaluations compels teachers to use formal evaluation procedures when rating student performance for grading purposes. Some of the more common evaluation instruments used in skill subjects are explained below.

CHECKLISTS. Observations of student performance can be structured through the use of checklists. Rating scales generally accompany each checklist item. A composite score is computed for each student, and the student is ranked against a norm or with other students of the class. Attainment of proper business attitudes and traits are frequently evaluated through the use of checklists.

PRACTICE SETS. The problem-solving ability of students is measured by practice sets, since the student is placed in a situation of new or unusual relationships that require careful analysis and interpretation of data in order to arrive at a solution or decision. The practice set provides the student with an opportunity to have his prior learning reinforced through the solution of problems related to actual business practice. Personal skills (attitudes, traits, etc.) and technical skills (accuracy, speed, etc.) can be evaluated during practice set usage. Practice sets can serve as both instructional and evaluative devices.

SHORT-ANSWER TESTS. Most short-answer test items measure vocabulary and knowledge of techniques and principles. Short-answer tests are effective in revealing whether students have grasped the "why" aspects of a skill subject.

PROBLEM-STYLE TESTS. When students perform actual or simulated office-related tasks, problem testing is involved. Such tests measure the ability of students to apply and integrate knowledge of fundamental principles in the solution of a problem. For instance, students in accounting may be asked to prepare an income statement. A problem test provides the best means for placing a student in a situation of new or unusual relationships that requires careful analysis and interpretation of information in order to derive a solution.

ESSAY TESTS. Although not used extensively in skill-type subjects, essay tests give students an opportunity to demonstrate how well they can organize and express their ideas on a particular topic. Essay tests have special relevance in accounting or office procedures where students might be given a situation to analyze. Essay tests measure a student's reasoning ability. Many teachers have shunned essay tests because of the lack of objectivity and the time required in scoring. In scoring essay tests, credit should be given for logical analyses as well as for the inclusion of key data in the written response.

PRODUCTION TESTS. After the student has acquired an acceptable degree of skill, business teachers should test for transfer of learning. The problems to be completed should be as "real" as possible. For example, in typewriting, little learning is accomplished through timed writings because of the limited transfer to real-life situations. Therefore, production-type activities should consume the major part of the typewriting testing program. Each student's goal should be to narrow the gap between his straight-copy rate and his production rate. In the advanced skill classes of typewriting and shorthand, major weight in grading should be placed on the ability of the student to produce mailable copy, especially toward the end of the course.

SPEED TESTS. In typewriting, shorthand, and office machines, speed tests are frequently given to measure growth in skill. Such measurements should be given periodically, and only after a student has completed a skill-building phase of instruction. The frequent use of speed tests results in diminishing returns when a carefully chosen speed-building program does not precede evaluation. Also, the length of the measurement interval and the difficulty of the material must remain consistent if valid results are to be achieved.

The appropriate error allowance would be that which promotes maximum speed development and fosters a reasonable degree of accuracy. The accuracy standards in a particular employment area should influence the degree of accuracy acceptable for terminal performance.

## CONCLUSION

Any form of evaluation should be for the dual purpose of increasing student effort and performance and preparing students for future employment in business. Since students vary in ability to perform on certain types of evaluation instruments, different types of tests should be given whenever feasible. Consistently giving only one type of test may provide misleading data on student progress. The more instruction is individualized, the more testing must be individualized. Teachers must accept a wider range of measurement instruments as students begin to learn at their own speed and level.

Every effort must be made by teachers to create a favorable attitude toward testing among their students. Tests must always be given for a definite educational purpose and not merely for the sake of testing or utilizing a class period. Evaluation must be a continuous process that guides students toward the achievement of well-defined objectives. Measurement devices that help students discover their strengths and weaknesses are vehicles for effective learning.

CHAPTER 15

# Construction of Evaluation Devices and Interpreting Results—Subject Matter Areas

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Of all the developments in education, accountability has had as much impact as any. Escalating school costs and budgets and some evidence of substandard levels of learning have stimulated the public to question the responsibility and effectiveness of education. Valid and reliable evaluation procedures are necessary to answer questions and provide evidence of educational accountability or the lack of it.

A complete evaluation process includes both an assessment of student growth and the effectiveness of the teaching/learning system that has been designed and delivered. This chapter, however, will examine only the evaluation of student growth or achievement.

Before any devices for evaluative purposes are constructed and their results interpreted, a framework including the guidelines for the process must be established. The following nine statements about evaluation provide the philosophical framework and guidelines for the later construction of evaluative devices and the interpretation of the results.

*1. Evaluation and testing are not synonymous.* Evaluation involves a judgment or appraisal of the value, merit, or amount of learning that has occurred. This appraisal or judgment is based upon some measurement such as a test score. However, in terms of measurements used for the appraisal or judgment, more often than not a synthesis of different measurement inputs is used. In evaluation, therefore, test scores are just one measurement. Various objectives with different types of measurement techniques should be considered in the evaluation process.

*2. Evaluation is an integral part of the total instructional program.* Instruction involves the selection of learning objectives, appropriate methods, and materials. In that evaluation attempts to appraise the extent to which the objectives have been achieved, the measurement devices must be appropriately matched to characteristics of the objectives and to methods and materials used. Any measurement device, whether it be an objective test or a teacher's observations, must be planned in conjunction with the other elements of the instructional program.

*3. Evaluation should incorporate the assessment of cognitive, affective, and psychomotor objectives.* Since the purpose of evaluation is to appraise learning outcomes, i.e., measuring the extent to which objectives are achieved, all classes of learning objectives must be included in the appraisal. Typically,

written tests are used for measuring cognitive development. However, written tests too often make up the measurement devices for all evaluation purposes. If affective and psychomotor objectives are also included in the learning plan, then other measuring devices should be used in the evaluation. Rating scales, checklists, self-checks, and other measuring devices may be used with affective and psychomotor objectives.

*4. Evaluation should include a variety of measurement devices and formats.* Learning or educational objective attainment is multifaceted. No one test, instrument, or device can possibly provide the input necessary to appraise what or how much has been learned. Therefore, a complete evaluation includes a variety of measurement or assessment devices selected because of their appropriateness in measuring specified student achievement.

*5. Evaluation should provide feedback that students and parents, as well as teachers, can use intelligently.* Learning involves sharing, interacting, and cooperation among teacher, student, parent, and community. This joint venture should not end during the evaluation process. If students are to become responsible for themselves and their own self-improvement, if parents are to understand the educational status of their children, and if a community is to believe in the accountability of education, measurement outcomes and evaluation results should be shared.

*6. Evaluation involves an assessment of inputs as well as outputs of the educational system.* The level of learning or knowledge that a student beginning a course or other educational unit possesses is vital not only in the development of appropriate objectives but also in the assessment of the results. Therefore, the evaluation process begins prior to instruction with a student-status assessment and continues during the instruction and at the end of the instruction.

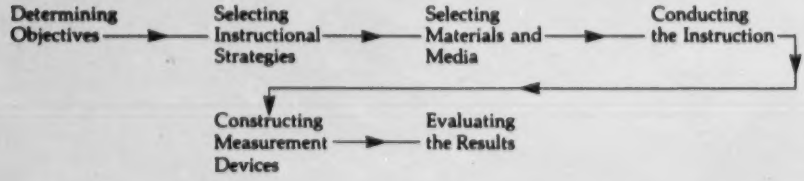
*7. Evaluation should include both criterion-referenced and norm-referenced measures.* To accomplish some objectives, a minimum standard of acceptance is 100 percent accuracy. For example, if an objective is to complete a bank deposit slip completely and accurately, the measurement and subsequent evaluation would involve comparing the student's performance with the standard or criterion of the objective. There would be no purpose in comparing or ranking students' performances. Yet, there are other objectives that may best be measured and evaluated by comparing students' performances. It is important to match the measure with the measurable intent of the objective.

*8. Evaluation should involve the learner as an active evaluator.* Traditionally, it has been the teacher's responsibility to evaluate student achievement. Students who evaluate themselves become more active in assuming responsibility for their own learning. Such self-evaluations may be especially appropriate with affective domain objectives and attitude development.

*9. Evaluation involves a systems approach.* To measure and appraise the results of learning effectively, several interrelated steps must be completed. Evidence of responsibility and accountability dictate that a systems approach to evaluation be used.

## A SYSTEMS APPROACH TO INSTRUCTION AND EVALUATION

There are three types of measurement and appraisals in a system of instruction and evaluation.[1] First, a diagnostic evaluation is completed to assess the learner's knowledges, skills, or attitudes prior to the instruction. Second, a formative evaluation is conducted. During the instructional unit an evaluation is conducted to determine the progress toward the accomplishment of the objectives. Third, at the conclusion of the instructional unit, a summative evaluation is executed. It involves an overall statement as to the accomplishment of the instructional unit objectives. For example, using tests as the measuring device, a diagnostic evaluation might involve a unit pretest, a formative evaluation might use a quiz or chapter test, and a summative evaluation might measure attainment of the objectives via a unit test. The following is a commonly used system of instruction and evaluation.




The system is as applicable to the subject matter areas of business education as it is to the skill areas. The initial step involves the determination of objectives, which in turn become the foundation for the instruction and evaluation. The formulation of objectives, therefore, should be given careful thought and consideration and should be directly linked to the philosophy of business education. Without soundly developed objectives, there is no solid basis for evaluation.

*Determining objectives.* Various statements developed by the Policies Commission for Business and Economic Education have been devoted to the philosophy of business education. This philosophy should be reviewed and thought through prior to writing any objectives.

For the subject matter areas of business education, one particular Policies Commission statement is very relevant: "This We Believe About Business Education in the Secondary School." It contains a reference to the role of consumers, workers, and citizens in the interpretation of economic issues, the efficient management of their economic affairs, and an understanding of the operation of the American business system. As the teacher of the subject matter areas of business education begins the process of identifying objectives, this specific philosophical point should be considered.

The following guidelines for formulating objectives provide an excellent reference format for teachers:

> First, the objectives should be stated in terms of desired changes, and preferably in terms of explicit behaviors which can be observed.

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[1] Green, John A. *Teacher-Made Tests.* Second edition. New York: Harper & Row, 1975. p. 48.

Second, the objective should be measurable.

Third, the objective should be worthwhile.

Fourth, the objective should be achievable, that is within the purview of the school and within the capabilities of the pupils.

Fifth, the objectives should be precise enough to act as guides for the selection of instructional strategies . . . materials . . . media, and the measurement instruments. . . .

Sixth, objectives should be written and shared with the learners.[2]

Besides these guidelines for formulating objectives, the cognitive, affective, and psychomotor domain classification of objectives should be considered. In the subject matter area of business education, most objectives will be of the cognitive (intellectual skills such as knowing, understanding, and problem solving) and affective (attitudes, values, and feelings) varieties. It is important to keep these classifications in mind because the kind of device used to measure learning achievement is based upon the type of objective being reviewed.

*Selecting instructional strategies, materials, media, and conducting instruction.* These steps in the instructional and evaluation system involve the means by which teachers and learners can achieve their educational objectives. The type of objectives and the desired results should be reflected in the methods and materials used for instruction, and in turn, the measurement devices used for evaluation purpose should reflect both the objectives and the instructional methods and materials.

*Constructing measurement devices.* Ideally, the devices used to measure the achievement of learning objectives are planned in conjunction with the formulation of performance goals. Prior to any instruction, the measurement devices should at least have been planned. The actual construction of the test, rating scale, or other measurement device may then occur after the instruction is completed.

In planning and constructing measurement devices, an outline of the objectives provides a means for identifying what is to be measured and in turn evaluated. At this point, it is important to consider the classification of the objectives, i.e., cognitive, affective, or psychomotor. The type of measurement device and the format should be directly related to the type of objective.

Within the cognitive domain, basic knowledge and comprehension objectives may be appropriately measured by objective tests with true-false, matching, multiple-choice, completion, and short-answer types of questions. With the higher level cognitive objectives, essay and performance measurement devices may be more appropriate.

Affective objectives dealing with attitudes, values, and feelings are often by-products of cognitive and psychomotor objectives. Because they deal with more internalized than externalized behavior, the achievement of affective objectives may be difficult to assess. Observations of the learner's

[2] *Ibid.*, pp. 11-13.

behavior, essays, and learner self-checks may be most appropriate in measuring the achievement of affective objectives.

Psychomotor objectives may be most accurately measured by performance and product assessment devices. In addition to considering the compatibility of the objective and the devices when constructing measurement devices, teachers should consider several practical matters.

*Evaluating the results.* The final step in the instructional and evaluation system involves scoring the measurement devices, interpreting their results, and assessing the progress students have made toward the attainment of educational goals.

## CONSTRUCTION OF MEASURING DEVICES TO BE USED IN EVALUATION

Prior to constructing any device for measuring student achievement, a teacher must consider the learning objectives and the most appropriate way to measure them. A review of the literature disclosed several different ways of typing or categorizing measuring devices or learning assessment techniques, including the four that follow:

Popham, Schrag, and Blockhus have presented an evaluation continuum that arranges the various types of tests from contrived to actual performance.[3] Their continuum includes various types of written tests (true-false through essay) and various types of performance tests (individual through actual employment and consumer activity).

Daughtrey has written that learning in basic business education can be evaluated through various means such as written tests, performance-application tests, observations of students at work, classroom discussions, and student self-evaluations.[4] She categorizes these various techniques as "evaluation through tests" and "informal evaluation."

Green, in describing the construction of various tests, has categorized them as informal objective tests, performance tests, essay tests, and oral examinations.[5] These test categories have been subdivided to include various types of the main-heading tests.

Payne's treatment of cognitive and affective learning has included objective tests, essay tests, and "self-report affective items and inventories" as the basic measuring device categories.[6] He also has advanced an important point of consideration. Since affective and cognitive learning are inseparable, concern with both kinds of outcomes provides evidence of concern for the "whole child." Business educators are keenly interested in affective domain outcomes as well as cognitive; therefore, measuring devices for affective domain outcomes must be constructed too.

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[3]Popham, Estelle L.; Schrag, Adele F.; and Blockhus, Wanda. *A Teaching-Learning System for Business Education.* New York: McGraw-Hill Book Co., 1975. p. 70.

[4]Daughtrey, Anne Scott. *Methods of Basic Business and Economic Education.* Second edition. Cincinnati: South-Western Publishing Co., 1974. pp. 260-64.

[5]Green, *op. cit.*, pp. 6-8.

[6]Payne, David A. *The Assessment of Learning: Cognitive and Affective.* Lexington, Mass.: D.C. Heath and Co., 1974. pp. 95, 137, and 164.

*A categorization of measuring devices by type of student response.* A careful examination of the four previously mentioned ways of typing or categorizing measuring devices brings forth another, somewhat eclectic, approach. Measuring devices for evaluation purposes may also be categorized by the type of student response involved. Using this approach, there are three basic categories: (1) written-response devices, (2) performance-response devices, and (3) self-appraisal response devices.

The written-response devices include the various objective test formats, alternate response, multiple choice, matching and short answer, and the subjective or essay format. The performance-response devices are of two basic types. One type, of which there are several techniques for measuring, is the assessment of the process or procedure used to complete the performance. The other is an assessment of the product that has been derived from the performance. There are several techniques for assessing the product. The self-appraisal response devices may be used for determining changes in attitude and provide students with the opportunity to assume some responsibility in the learning process.

Borrowing from the concept of an evaluation continuum from Popham, Schrag, and Blockhus, the following illustration presents a continuum of measuring devices for evaluation purposes based upon the level of student involvement in the measuring process. For example, a student's response in completing a true-false test is relatively passive, whereas, self-appraising of learning achievement or attitude growth is active involvement in the assessment process.

| Passive Student Response | Written Response | Performance Response | Self-Appraisal Response | Active Student Response |
|---|---|---|---|---|

*Characteristics of effective and efficient measuring devices.* Prior to specific directions concerning the construction of measuring devices, a discussion of the critical characteristics of any type of effective and efficient assessment technique should take place. Therefore, the following discussion of validity, reliability, and usability is presented.

The key to constructing effective and efficient measuring devices is to ensure that they are valid, reliable, and usable.[7] A measuring device is valid if it actually measures what it purports to measure. The selection and construction of a valid instrument is dependent upon matching an appropriate evaluation procedure with the learning to be measured. As mentioned previously, certain types of measuring devices are more appropriate for certain types of learning objectives. For example, basic-knowledge cognitive objectives might be more appropriately measured by objective-test devices than by product-assessment devices. Therefore, test builders must be sure their devices really measure what is supposed to be measured.

The reliability of an evaluation device is concerned with the consistency of the measurement. A reliable device will produce approximately the

[7] Green, *op. cit.*, p. 137.

same measures of learning when administered originally and at subsequent times. Thus, the construction of a measuring device must include a concern for not only validity, but also for reliability or a consistency of scores or measures.

The remaining characteristic of an effective and efficient measuring device is usability. A device designed for evaluation purposes should be easy to administer and score and economical in terms of materials used and time consumed by teachers and students. In many instances, usability may have to be compromised in order to ensure validity of the evaluation. For example, it might be easier to administer and score an objective test (usability) evaluating a student's ability to reconcile a bank statement, but the validity of this evaluation procedure would be doubtful. Thus, a performance-evaluation device which, for example, has the student actually reconcile a bank statement may be more valid; but it could be more difficult to administer and score than an objective test.

Since validity appears to be the most critical characteristic, a teacher should take steps to ensure the validity of all measuring devices. Although there are various types of validity, the classroom teacher using measuring devices to evaluate student achievement should consider content validity as the most pertinent. Content validity refers to the extent to which a measuring device samples the subject matter and coincides with the learning objectives. Careful examination of the measuring device for the most part provides an indication of content validity. Green observed that for content validity, the examination of textbooks and other classroom learning resources, courses of study, and opinions of experts are the most valuable.[8] Consequently, one worthwhile project for any group of business education teachers would be a careful perusal of their classroom measuring devices. After reviewing the curriculum, learning resources, and learning objectives and comparing them to the content of the measuring devices, a sound and logical judgment could be made concerning content validity. Certainly in this era of accountability, evidence of valid measuring devices substantiates a business educator's claim to accurate evaluations of student achievement.

*Written response devices.* Objective devices are most useful in measuring students' knowledge and understanding, i.e., cognitive objectives. More specifically, Green remarked that the first four levels of the cognitive domain —knowledge, comprehension, application, and analysis—are the categories in which these objective tests are most appropriately used.[9]

*Alternate-response devices.* The most common type is the true-false device. However, variations, including a yes-no form, a form requesting students to correct false statements, and a multiple-option form similar to a multiple-choice device, are available to teachers. The following illustrations provide examples of various alternate-response measuring devices for a general business class.

1. True-False Item:

   Demand determines what businesses produce. T F

[8] *Ibid.*, p. 140.

[9] *Ibid.*, p. 57.

2. Yes-No Item:

| | | |
|---|---|---|
| The total of all goods and services produced in one year equals the gross national product. | Yes | No |

3. Correct False Statement Item:

Make every false statement true by providing a substitute for the underlined word.

A public utility is allowed to operate as a monopoly by <u>the President of the United States</u> _____

4. Multiple Option Item:

A good budget

| | | |
|---|---|---|
| a. includes a goal of some kind | T | F |
| b. includes saving on a regular basis | T | F |
| c. includes a record of money spent | T | F |
| d. includes an estimate of expenses and income | T | F |

In constructing alternate-response devices, keep in mind their advantages. They are appropriate for measuring knowledge and understanding learning objectives, relatively simple to construct, and helpful in covering a large range of material. However, also remember that because this type of measuring device encourages guessing, it nullifies some of the accuracy of the evaluation.

A few pointers on writing alternate-response devices include: (1) make each statement entirely true or entirely false; (2) do not extract exact statements and quote them directly from the textbook; (3) statements should not be false because of trivial details; and (4) avoid negatively worded statements.

*Multiple-choice devices.* Many test experts consider the multiple-choice the best type of objective device for measuring a variety of learning objectives. Green pointed out that the multiple-choice device is appropriate for all cognitive domain objectives.[10]

Multiple-choice items consist of an incomplete statement followed by several choices or alternatives to complete the statement correctly. Although it may appear simple, one serious disadvantage of multiple-choice items is the difficulty of constructing good ones. In fact, many teachers limit the use of multiple-choice items to lower level cognitive objectives which may be measured more efficiently by an objective device less difficult to construct.

In constructing multiple-choice devices, include the main point of the problem in the incomplete statement so that only one choice will be correct and defendable. In order not to provide clues, make sure that all alternative answers are consistent grammatically and in length. Also, to avoid unnecessary confusion, avoid negatively stated items and the use of all-encompassing terms such as always and never. Here is an example of an application level cognitive object measuring device in a multiple-choice format.

1. If you could afford to spend $130 per month for life insurance protection,

[10] *Ibid.*, p. 69.

how much straight life insurance can you buy if the rate for your age group is $10 per thousand?

a. $10,000

b. $23,000

c. $13,000

d. $20,000

*Matching form measuring devices.* For the most part, matching items are most appropiate for measuring cognitive objectives relating to recognition and recall. In the subject matter areas of business education, each student must know certain basic facts. In many cases this knowledge is necessary for achieving high level learning objectives. Thus, the matching device provides the teacher with a valid device for measuring the attainment of this basic knowledge.

The primary drawback of the matching device is its limitation to lower levels of cognitive objectives. Because this device is easy to construct, administer, and score, it is often abused by teachers who use it for measuring the attainment of higher level objectives. This practice certainly reduces the validity of the measurement and subsequent evaluation.

It is suggested that in writing matching measuring devices, only similar or like premises and responses should be grouped in one set. Another point to consider is providing more responses than questions or more questions than responses to preclude a student's correctly matching through a process of elimination. Another tip is to arrange the responses in some systematic order, such as alphabetical order. This arrangement helps the student who knows the correct answers locate them quickly. And finally, try to include all questions and responses to a matching set on the same page. Here is a matching set appropriate for recall or recognition from a *Business Law* class.

Match the correct legal terms from the right-hand column with the definitions presented in the left-hand column.

| | |
|---|---|
| _____ Breaking of a contract | a. Assignment |
| _____ Changing the rate of interest on a contract | b. Breach |
| _____ Sets a time limit for bringing suit on a debt | c. Discharge |
| _____ An offer to perform an obligation | d. Material Alteration |
| | e. Statute of Limitations |
| | f. Tender |

*Short-answer measuring devices.* The short-answer device can be constructed in different formats such as questions, incomplete sentences, definitions, and identification items. It is particularly appropriate for measuring the attainment of cognitive objectives dealing with recall, recognition, and identification.[11]

Like other written objective measuring devices, the short-answer device is relatively simple to construct, effective in measuring lower level cognitive objectives, and can be used to sample a broad range of subject matter. Also, like other written objective measuring devices, it has certain drawbacks. First, because short-answer devices are appropriate for lower level cognitive

[11] *Ibid.*, p. 58.

objectives, their use encourages students to memorize facts just for test purposes. Second, these devices are limited to those learning objectives dealing with recall, recognition, and identification. And third, short-answer devices lack some lifelikeness. The problems students encounter in life normally involve a variety of possible appropriate solutions. Thus, one specifically worded, short-answer solution lacks a certain realism.

Although the construction of short-answer devices may appear simple, there are a few basic points to consider. When writing incomplete statements, be sure to omit only significant words. Watch grammatical construction so that the correct answer is not given away. Keep the length of answer blanks consistent so that unnecessary clues about the length of the correct response are not provided. Limit the length of correct responses to single words, phrases, or a few sentences to avoid responses that lack specificity. Be precise with wording; it is the students' only clue to the correct solution.

For a general business class here are some examples of short-answer measuring devices:

1. Question: What is the term for the amount for which a bond can be redeemed at maturity?
2. Incomplete Sentence: As a group, banks, credit unions, and savings and loan associations are called _____.
3. Definition: Define Capital Gain._____
_____
4. Identification: Identify the type of tax that cannot be shifted to someone else. _____

*Subjective or essay measuring devices.* Various cognitive domain objectives can also be measured by subjective or essay devices. They are useful for the upper level objectives in the areas of application, analysis, synthesis, and evaluation. The essay written-response measuring device is also less restrictive and passive than the objective devices.

The subject matter areas of business education include many objectives beyond the scope of the lower level cognitive domain. For example, Daughtrey presented as objectives of basic business—to aid the individual in developing:

1. The knowledge, skills, abilities, and attitudes that will enable him to use sound reasoning in his personal business decisions as a consumer . . .
2. An understanding of and an appreciation for the American Business Enterprise System, emphasizing both his privileges and responsibilities . . .
3. A level of economic literacy sufficient . . . to analyze alternatives, to make . . . sound decisions, and to take intelligent actions . . .
4. An acquaintanceship with . . . occupational opportunities in the business sector . . . .[12]

These objectives certainly involve recall, recognition, and other lower level cognitive objectives, but they also include high level cognitive objectives and affective objectives. Therefore, measuring devices other than objective written response devices are necessary for valid evaluation purposes. The

[12]Daughtrey, *op. cit.*, p. 42.

essay device is very appropriate for measuring understandings, critical thinking, reasoning and decision making, problem solving, and attitudes.

Although essay devices provide a legitimate means by which the business educator can measure the degree of achievement of high level cognitive objectives, they also present a serious and challenging question: How will the essays be scored? Scoring essay devices is very time consuming. Since the purpose of the device and scoring is to evaluate the students' learning, it is critical to construct a thoughtful system—one that actually measures the objective. Because many good essay devices have been ruined because of poor scoring systems, the construction of a legitimate scoring system is the key to using essay devices for measuring and subsequent evaluation purposes.

There are basically two types of essay devices, extended-response and restricted-response. The extended-response essay is an open and unstructured device which allows the student great latitude in formulating and writing an answer. Thus, the open and unstructured nature of the essay presents additional difficulty in scoring. The restricted-response essay, which is easier to score, is quite specific and calls for a more structured and circumscribed response.

The teacher must consider several points in constructing essay devices. The first and most obvious is to determine which objectives are appropriately measured by the essay. The second point refers to the ability of the students to write. A teacher desiring to use the essay device may find it necessary to instruct his/her students in the finer points of essay writing. The third point deals with the usability of the device. A teacher must decide if the students have sufficient time to plan and write their responses and if time is available to score them properly. The fourth point is designing a fair scoring system.

The point-score method of scoring essays is perhaps as fair a procedure as exists.[13] With this procedure the teacher must outline a complete and correct response and assign a total point value to it. Then the complete response must be considered and each aspect assigned a point value. The teacher should read through all the essays, one question at a time, and without identifying the students' papers, assign point values. Here is an essay device for a *Consumer Economics* class and a key for scoring it:

**Essay Device**

A store has a really fine-sounding stereo system that you are interested in and advertises installment credit at no charge. They claim the installment price and the cash price are the same. (1) Explain the effect of this policy on the store's cash customers and the prices they pay, and (2) describe the costs of installment credit.

**Key**

I. Effect of Policy

| | |
|---|---|
| a. Cash customers are paying too much | (2 pts.) |
| b. Cash prices are artifically high | (2 pts.) |
| c. Cash customers are in effect paying someone else's installment credit costs | (3 pts.) |

[13] Green, *op. cit.*, p. 117.

d. Credit costs should be borne by the installment buyer who is benefiting from the installment purchase (2 pts.)

II. Installment Credit Costs

a. Interest—To obtain the use of someone's money or goods costs extra. This involves the principle of investing. (2 pts.)

b. Insurance—There is always a risk involved that someone will not pay for the goods they have purchased through an installment sales contract. This will help offset bad debts. (2 pts.)

c. Administration—The costs in granting, servicing, and collecting credit are high. Records must be kept, bills mailed, and payments collected. (2 pts.)

Total 15 pts.

*Performance-response devices.* Certainly in the subject matter areas of business education there are higher level objectives than just knowing and understanding. Surely, as an outcome of study in general business, consumer economics, business law, and other subject matter areas, students should be able to perform, to produce. If this is true, the most logical means of measuring and evaluating these outcomes is through performance-response devices.

Some "doing" objectives are related directly to the subject matter or content. Examples would be writing checks, reconciling bank statements, setting up a budget, completing a credit application and interview, buying insurance, and writing a sales contract. Other "doing" objectives are related to basic skill development. These might include developing listening skills, writing skills, oral communication skills, and human relations skills. Obviously, to evaluate the attainment of these "doing" objectives, the student must "do" and the teacher must evaluate the "doing" and the outcome of the "doing."

The bottom line to accountability in business education is student performance in the business and consumer worlds. Performance is the key word. If the business educator is to evaluate student achievement satisfactorily, prove accountability, and predict student success in the business and consumer worlds, comparing student performance with a desired level of achievement is mandatory. Criterion-referenced evaluation is, therefore, essential.

*Performance-response devices based upon process.* With some objectives it is the process or procedures, or steps involved, that are imperative and most pertinent to accomplishment. However, the product or outcome of the process is also important. In many situations the product or outcome is related to many factors, thus it is the process or the completion of certain steps and procedures that is important. For example, in buying automobile insurance, the policy purchased (outcome) is certainly important, but it is also relative to individual considerations. In this example, the steps the student took to purchase the insurance may be more important. Did the student consider state regulations; personal budget constraints; company, policy, and cost differences? Perhaps the process or procedure of considering points like

these is more important than the policy purchased. Another example might involve an objective related to growth in human relations skills. The process of working with others, perhaps in a group situation, may be the most appropriate means of developing these skills; therefore, observing a student in this process may be the most logical means for determining the attainment of the objective.

*Performance-response devices based upon product.* On the other hand, there may be cases in which the outcome or product is more appropriate for determining the achievement of an objective. In writing checks and other negotiable instruments, there are certain steps to take to complete the instrument. However, the real determinant of student achievement is not the completion of those certain steps, but knowing the student has written a complete instrument that meets the criteria for being negotiable.

*Performance-response devices based upon both process and product.* An evaluation of the attainment of some learning objectives is dependent upon both the process and the product. In such cases, the final outcome or product may be dependent upon the completion of a specific process. Thus, the process is very important. Yet, because of the utility of the product, it cannot be overlooked either. Budgeting can be used as an illustration. Specific steps must be taken to construct a family budget; therefore, evaluating the process of constructing budgets is important! Also, because the budget is actually used for proportioning income and controlling expenses, it may be important to evaluate it too. Whether it is important to evaluate both the process and product is usually dependent upon the philosophy of the teacher.

*The development of performance-response devices.* The foundation or basic premise upon which performance-response devices are founded is that a comparison of some kind of student performance with a predetermined and desired performance is the most appropriate way to evaluate certain objectives. Thus, the initial step in developing performance-response devices is to ensure that this device is right for the objective to be measured and evaluated.

Once the appropriateness of the device and the objective have been verified, the type of performance should be established. Is it process and/or product performance? Then the specific steps in the process and/or specific product can be determined. At this point the criterion can be established.

The next step in developing the performance-response device is to determine the methodology that will be used to actuate the performance. A few of the most common methods include a case problem, an in-class project, a role-playing situation, a simulation, or a field-based project.

The culmination of the process to develop a performance-response device is the production of some type of observation recording sheet, checklist, or rating scale to be used for measuring the performance of the student. The measured performance can then be compared to the criterion for evaluation purposes.

The following illustration shows the development of a performance-response device:

1. Objective: Given a case problem, the student will construct an appropriate budget that includes the two essential elements.

2. Type of Performance: Both process and product

3. Process Checklist:
Directions to the student: Check the items you have completed in constructing your budget.

A. _____ Determined family income first
(1) _____ Considered only take-home pay
(2) _____ Included dividends and savings account interest income

B. _____ Planned how the income would be used
(1) _____ Considered fixed and unavoidable expenses
(2) _____ Calculated variable living expenses
(3) _____ Provided for regular savings

4. Product Rating Sheet
Directions: Check the items appropriate for the budget.

A. _____ All parts of a budget included
B. _____ Math calculations all correct
C. _____ Format is understandable
D. _____ Is realistic
E. _____ Is usable

*Student-appraisal and other affective measuring devices.* Cognitive outcomes make up the backbone of the subject matter area objectives in business education; consequently, the measuring devices presented have been geared to measure these types of objectives. Surely, many business educators feel comfortable and confident in helping students attain cognitive objectives and measuring the results thereof.

However, there is another objective domain applicable to the subject matter areas that creates feelings of discomfort and uneasiness in teachers—the affective domain. As the first Policies Commission statement pointed out in 1962, business education has a role to play in helping students develop attitudes accepted by our society. An overall affective objective of the subject matter areas of business is an understanding of our economic system and an appreciation for it. Daughtrey has reiterated this statement in her objectives of basic business.[14]

This being the case, how does a teacher measure and evaluate the attainment of an affective objective? Certainly measuring such a thing as attitude is very difficult; however, several suggestions for measuring and evaluating the attainment of affective objectives are available.

For example, Payne listed some approaches to assessing attitude development: (1) an examination of verbal expressions through statements of opinions and self-ratings, (2) a consideration of attention/distraction through teacher observations, (3) an analysis of students' written expressions by the teacher, (4) a view of activity levels through teacher observations, and (5) a look at specific performances and behaviors through various observational techniques.[15] A synthesis of Payne's approaches shows the importance of a variety of approaches (oral, written, and behavioral) facilitated by student self-ratings and teacher observations.

[14] Daughtrey, *op. cit.*, p. 42.

[15] Payne, *op. cit.*, pp. 136-37.

Popham, Schrag, and Blockhus view affective behaviors in determining how enthusiastically a student works at developing new competencies.[16] They propose that affective behaviors are many times by-products of cognitive behaviors rather than the direct result of planned affective-development learning activities. In addition, it is their belief that the most accurate device for measuring students' affective behaviors is through multiple controlled observations.

Prior to measuring affective behaviors and evaluating affective competencies, Popham, Schrag, and Blockhus stated that observation instruments for the behaviors must be constructed. Although this procedure may appear difficult and time consuming, it is necessary. Fortunately, they have presented several fine examples, including observation instruments for evaluating a student's interaction with one other person, for evaluating the interpersonal environment of a group, for analyzing an individual's interaction within a group, and for peers to observe and assess a group discussion.[17] These devices could be implemented very easily in the classroom.

Daughtrey contends that the most effective aspect of the learning process might possibly be the measuring and evaluating of attitudes when students actually do the measuring and evaluating. She suggests the following ways for students to evaluate their own attitudes:

1. . . . write an appraisal of their attitudes showing before-and-after-the-study reactions.
2. Write the attitude objectives on the board and discuss . . . the degree to which they have been achieved. . . .
3. The class can develop a self-appraisal checklist . . . and the teacher should let students evaluate themselves.
4. Using . . . the checklist, each student could have his parents or family help him evaluate his growth.[18]

Several very commendable and usable attitude-development assessment devices have also been presented by Daughtrey. One is a before-and-after opinionnaire that students could use to determine their consumer attitudes. In addition to group activity reporting records, a self-evaluation checklist for evaluating a student's participation in a group project is included.[19] These too could be quickly and easily implemented in the classroom.

By considering and applying points from each of the three sources, a teacher could very easily plan and construct a complete and efficient system for measuring affective objective attainment. Certainly, various approaches such as observing individual behavior and group behavior, analyzing oral and written responses, and having students appraise themselves would be included. Various observation guides, criteria sheets, checklists, rating sheets, opinionnaires, and self-appraisal devices would also be necessary.

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[16] Popham, Schrag, and Blockhus, *op. cit.*, p. 79.

[17] *Ibid.*, pp. 82-84.

[18] Daughtrey, *op. cit.*, p. 264.

[19] *Ibid.*, pp. 265-68.

## INTERPRETATION OF THE RESULTS OF MEASURING DEVICES

Scoring a written-response measuring device such as an objective test or essay is an important part of the evaluation process. Students, parents, and teachers are especially interested in finding out how many questions were correctly answered and what grades were earned. When performance is measured by an examination of a student's product or procedure, interest in the score or grade is also high. With affective objectives and attitude-development attainment, the interest in the results of the teacher's observations, self-appraisal checklists, or activity reports are no less keen.

Yet, all of these scores or results are not the final and really meaningful product of evaluation. What does a score of 21 correct answers out of 25 multiple-choice questions mean? On an essay test, if a student included 7 of the 10 essential elements and received a score of 70, what does this mean? If an examination of a pre- and poststudy attitude measuring device shows that a student changed his/her attitude in 11 areas and maintained his/her attitude in 12 areas, what does this mean?

Test scores, ratings, and ranking all lack significance unless they are interpreted and meaning attached. Evaluation, remember, involves judging and appraising the value, merit, and amount of learning that has occurred. The ultimate statement of evaluation relates what the students learned and didn't learn; what learning objectives were attained, partially attained, and not attained; and how effective and successful the instructional plan was.

Statistical procedures provide the teacher one means for interpreting scores, ratings, and rankings. Through the use of such well-known statistical tools as frequency distributions, mean scores, standard scores, and standard deviations, the business educator can show the interested parties how well the student did in comparison with other students.

This norm-referenced type of explanation of student achievement may still lack a specific enough statement as to the extent of success or failure experienced by the student. This is the rationale for the assignment of grades. The standard grading system of A, B, C, D, and E or F in most cases designates whether student achievement was excellent, good, average, poor, or inadequate. Of course, a teacher can establish certain levels of performance or learning and use them to determine specific grades.

Since most items on written-response and performance-response measuring devices can be related directly to measurable learning objectives, it is possible to determine the amount of learning or the number and degree of objectives attained. Unfortunately, however, it is more difficult to determine and interpret the value or merit of the learning that has occurred.

Students and parents want to know, and they are certainly entitled to know, how well the student succeeded. The ultimate answer or judgment cannot be made until the student has left the classroom and is functioning as a consumer and participant in the community and business world, yet it is the teacher's responsibility to judge and explain the value or merit of the learning students have achieved.

The professional opinion of the teacher is one valid means for determining the value or merit of the learning, but there are other sources of

input into this decision. Follow-up studies of students who have left the class or school can provide information comparing what they have learned to what they have found it necessary to know to function effectively as a consumer and participant in the community and business world. An advisory group or committee, consisting of representation from students, parents, community, labor, and business, could provide input that would help the teacher compare student performance with the desired levels of performance and make subsequent judgments about the value or merit of the learning.

It may be that the key point for the teacher to remember is that test scores, performance ratings, teacher observations, and student self-checks are not the conclusion of the evaluation process. The teacher, through various means, must interpret the results of the measuring devices to students and parents in terms of the level and value or merit of the learning.

## SUMMARY

Evaluating the learning outcomes of the subject matter areas of business education is important for such reasons as proving accountability and determining the effectiveness of instruction. Evaluation encompasses the overall appraisal or judgment about the learning that has occurred, and it is based upon the input derived from various measurement devices such as tests, observations, and opinionnaires.

Using a systems approach to instruction and evaluation is a very sound means for insuring that objectives are developed, instructional strategies and materials are planned, valid measuring devices are constructed, and the outcomes assessed. Involved in this system is a diagnostic evaluation to assess the learner's competencies prior to the instruction, a formative evaluation during the instruction to determine progress, and a summative evaluation at the conclusion of the instruction to determine the outcomes.

The most critical characteristic of an effective and efficient measuring device is validity. To insure that a device constructed to measure learning is valid, the teacher should be extremely careful to match with the objective an appropriate measuring device. Written-response devices such as objective tests are most valid for lower level cognitive objectives; essay tests can be used for assessing higher level cognitive objectives and, to a limited extent, affective objectives. Performance-response objectives are best matched to higher level cognitive, certain psychomotor, and to a limited degree, affective objectives. Self-appraisal devices including checklists, rating scales, and opinionnaires are best suited for affective objective assessment.

The data obtained from test scores, ratings from scales, and recorded observations must be interpreted so that the teacher, student, and parent can understand the level and amount of learning and appraise its value or merit. This is evaluation. Relatively simple statistical procedures, assignment of grades, teacher judgment, follow-up studies, and input from advisory

committees are examples of methods for interpreting the results of measuring devices and evaluating student achievement.

In conclusion, a complete and accurate evaluation scheme for the subject matter areas of business education would include a variety of measuring devices, ranging from objective tests to self-ratings by students, appropriately matched with both cognitive and affective objectives. This evaluation scheme would also include the gathering of data throughout the instructional period—at the beginning, during the instruction, and at the conclusion. In addition, the scheme would include norm-referenced and criterion-referenced measures that are interpreted to students and parents.

# Part V

## EVALUATION OF INSTRUCTIONAL OBJECTIVES THROUGH GRADING

CHAPTER 16

# Evaluating Instructional Objectives In the Clerical Area

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The office practices course gives the instructor an opportunity to teach those tasks and to apply those standards generally believed to be required on most entry-level jobs in business and government offices. Before they enter the job market, students in an office practices class are given an opportunity to have their work evaluated on the basis of standards required by employers in the "real world." Although failure to meet these standards in the office practices class may result in unsatisfactory grades for the students, failure to meet similar standards in the "real world" may mean they will not secure initial employment or will not be able to hold jobs if they are fortunate enough to secure them upon leaving school.

## STRUCTURE OF OFFICE PRACTICES CLASS

Because of limitations of equipment, resources, and personnel, it is often necessary to teach office practices on a rotation schedule that allows one or more students to work independently on one unit (e.g., stencil duplicator) while another student or group of students works independently on a different unit (e.g., transcribing machines). During the time allowed for the course, the students then rotate through the remaining units.

Another structure that is becoming popular for the office practices course is that of office simulation, where students are given the kinds of problems to complete as might arise in a real office. This method requires that students rotate to different desks and/or assume various job titles during the course. Students then complete those tasks assigned in their roles as duplicating clerks, receptionists, proofreaders, etc.

But whether the class is taught on a rotation schedule, as a simulated office, or any combination of these structures, all students need not be required to complete the same problems. If the problems are varied, it is important that the time factor established for the completion of the problems be comparable to their degree of difficulty.

A motto to be followed in teaching and evaluating students in any subject, be it office practices or biology, might well be "to be fair, firm, and friendly—and in that order." When objectives and standards are established for the course, the students should be aware of them and know what they must do to accomplish them. Under such circumstances, few students will complain that the evaluating criteria is unfair.

Although the length of time spent on each unit, the number of units required, the number of units available, and the kinds of tasks included within these units may vary from school to school, there are certain basic knowledges and skills that will aid students in initial employment. Some of these knowledges are considered general in nature and are applicable to all jobs; others are considered specific skills that can be easily transferred to other business-related skills.

Several specific skills units that could be taught in an office practices class are: (1) reprographics, (2) filing, (3) transcribing machines, (4) nonstandard typewriters, and (5) calculating machines. Some general knowledges that could be included are: (1) interpersonal communication, (2) job application, (3) reference sources, (4) mathematics, (5) office etiquette, (6) office efficiency, (7) communication equipment and services, (8) business letter writing, (9) office safety, (10) office housekeeping, and (11) business data processing. In this chapter, general objectives and evaluative criteria will be discussed for specific skills units in reprographics, filing, and transcribing machines and for general knowledge units in job application and office housekeeping. Such models may then be adapted for other knowledge and skills units in the office practices course.

## ORIENTATION APPROACH

Before students are evaluated on their work, they should first have an opportunity to "give it a try." Few teachers, for example, would want to have their present driving ability evaluated upon the driving skill that they exhibited on the first day behind the wheel in a driver education class. Most of the equipment to be operated and the kinds of tasks to be performed by the students in office practices, however, are usually even more unfamiliar to them than the automobile is to a beginning driver.

*Get-acquainted problems.* For each specific skills unit in office practices, the instructor should give the students an opportunity to "give it a try." The teacher can construct get-acquainted problems that will provide students with an opportunity to become acquainted with the equipment and the kinds of skills needed for that unit, yet allow them to make "beginner" mistakes without having their initial-performance evaluation averaged with grades on later problems in the unit.

The instructor must evaluate these get-acquainted problems *with* the students. One way to evaluate *with* the students is to give them an opportunity to evaluate their own work by telling the instructor what they think is right or wrong with it. The instructor can then evaluate the students' work with them, pointing out what is right or wrong, why it is right or wrong, and in what ways the students might improve their work. These

evaluations on get-acquainted problems must be completed *before* the students proceed to problems that will be evaluated for grading purposes. The students must understand that the evaluation of these get-acquainted problems will not be recorded and will not affect their letter grade on that particular office practices unit nor their final letter grade for the course.

The number of get-acquainted problems for each specific skills unit may vary, depending upon the difficulty of the unit content. It is important to remember, however, that it is unfair to evaluate students immediately on tasks and equipment that are unfamiliar to them.

*Additional self-evaluation.* Prior to submitting work for graded evaluation, students may use another means to evaluate their own work. On the bulletin board near the appropriate work station, examples of completed problems from previous students (names of students should be omitted from the examples) may be displayed together with typed comments and suggestions on how that work could have been improved. These examples will give the students an opportunity to compare their work with the examples and to determine whether or not it meets the standards required for a particular unit.

## REPROGRAPHICS

Two duplicating machines, the stencil and fluid duplicators, will be discussed as possible units in reprographics. These duplicators are found in most secondary schools and in many small businesses. Two other duplicators, the photocopier and the offset printer, will not be discussed as specific units. Photocopying machines require such minimal training that no "hands-on" experience is necessary. Offset printers have only recently become available on the market in a size and at a cost that make them practical for schools and small businesses. If the offset printer becomes widely used in schools and businesses within the next few years, it should be considered for inclusion in a "hands-on" unit for office practices.

Although photocopiers and offset printers are not presented as specific teaching units, information about these kinds of duplicators should be taught. If they are currently being taught as units, many of the principles, methods, and evaluative criteria discussed for the teaching of the stencil and fluid duplicators may also be applied to them.

*An introduction to reprographics.* Prior to completing units on the stencil and fluid duplicators and the illuminated drawing board, students should first become acquainted with the different kinds of duplicating methods used in offices and the characteristics and capabilities of each of these methods. This background information is available in current periodical literature and vendor information booklets.

Any of the following teaching methods could be used to introduce reprographics: (1) case study, (2) question-and-answer, or (3) programmed instruction. No matter which method is used, this information should be available to the students in a format appropriate for the structure of the class.

After the unit introduction, which should cover offset printers, photocopiers, and fluid and stencil duplicators, the students should be able to

apply this information to determine the most appropriate and/or most economical duplicating method(s) to be used in specific problem situations (e.g., if the material is to be for in-house use only, fluid duplicating would be both appropriate and economical; if the material is to be sent to customers or other businesses, however, offset printing, photocopying, or stencil duplicating, although more costly, would be more appropriate because of the physical appearance of the copy). In other words, after the introduction to reprographics the students should be able to determine the most appropriate method(s) to be used based upon information supplied in the specific problems. Items such as the number of copies needed, the cost per copy, the quality of paper desired, and the physical appearance of the duplicated copies must all be considered when deciding upon an appropriate process.

Examples of copies produced from the various duplicating methods should be displayed on the bulletin board so that they can be examined by the students. It is especially important to display examples of copies made from duplicating equipment not available for use in the office practices classroom. In addition, the following items and information should be displayed next to each duplicated example: (1) an illustration or photograph of the duplicating machine from which the copy was made, (2) its advantages and disadvantages, (3) the cost or rental price of the equipment, (4) the cost of maintaining the equipment, and (5) the reproduction cost per copy.

No matter which teaching method is used to introduce reprographics, the instructor should discuss with the students their solutions to questions asked or to case-study problems assigned. It is equally important for the students to listen discriminatingly to the discussion and to the suggested solutions and to ask questions of the instructor as well as the other students in the class.

No graded evaluation is necessary for this introductory unit. If it is necessary to have a graded evaluation because of a school grading period, the teacher may use the case-study method and evaluate the students' solutions on the basis of their recommendations and their reasons for making such recommendations.

*Stencil duplicator and illuminated drawing board.* As most students have had no previous instruction on the stencil duplicator, it is essential that they have detailed procedures to follow that instruct them in how to type, make corrections, draw, write, and shade on a stencil. In addition, detailed instructions should be available on the operation of the stencil duplicator, the specific kinds of adjustments that can be made (vertical and horizontal placement, pressure, etc.), and the limitations and capabilities of the machine.

*Length of the unit.* The length of the unit is dependent upon the length of the course and the number of units included in the course. For the students to achieve skill in typing, drawing, and duplicating stencils, however, a minimum of 12 hours should be allowed.

*General objectives.* The general objectives for the stencil duplicator and illuminated drawing board are as follows:

Objective 1. To give students an opportunity, without penalty of evaluations (get-acquainted problems):

a. To learn to type and to make corrections on a stencil.

(1) Type a specific paragraph(s) EXACTLY as shown on the get-acquainted problem copy. (This paragraph(s) should contain typographical errors, capital letters such as M and W, and marks of punctuation such as the comma and the quotation marks. These letters and marks of punctuation do not print as well as other keys.)

(2) Use the correction rod (or paper clip) and correction fluid to correct any typographical errors.

(3) Examine the typed copy for uniform impressions, noting especially the problem keys listed in (1) above to determine if these letters and marks of punctuation need to be retyped and to determine if the correction fluid was properly applied.

b. To learn to use screening plates and lettering guides.

(1) Below the typed paragraphs indicated in (1) above, draw approximately three letters from each of three different lettering guides; shade three small areas, using three different screening plates.

(2) Examine letters and shading areas to determine if they need to be redrawn in order to obtain a uniform impression.

(3) Sign name with a stylus at the bottom of the page.

c. To run off a stencil, making vertical and horizontal adjustments.

(1) One copy for each of the following placements (requires machine adjustments):

(a) vertically and horizontally centered
(b) top margin of approximately one-half inch
(c) bottom margin of approximately one-half inch
(d) right margin of approximately one-half inch
(e) left margin of approximately one-half inch

(2) Examine duplicated copies for overall appearance and notice the effects of the machine adjustments.

These five duplicated copies of the get-acquainted problem should then be submitted to the instructor for an ungraded evaluation (see Orientation Approach section). These copies should be evaluated with the students, noting their use of the styluses, correction fluid, and machine adjustments.

Objective 2. To duplicate in color and to align copies:

a. Trace and/or draw a logo for a product or event (fictitious or real).

b. Duplicate in color.

c. Compose a slogan or information applicable to the colored design in "a" above. This information must be planned so that it will fit in the blank spaces of the design.

d. Type or letter the slogan or information on a second stencil.

e. Duplicate the second stencil on the colored copies from "b" above, making machine adjustments for correct placement of copy.

Objective 3. To learn to complete special problem(s) such as a line graph, French-fold program, or a patch on a previously completed stencil:

a. Plan problem(s) within space limitations. For additional practice, portions of the problem could be completed in color, using lettering guides, screening plates, and designs.

b. Duplicate copies, making proper machine adjustments for correct placement.

Objective 4. To learn to duplicate on off-sized paper and/or cards. (See suggestions in 3a and 3b above.)

These objectives do not imply that the students should be required to complete only four problems. Additional problems for each objective would be necessary in order for the students to achieve skills in preparing a stencil and in operating the stencil duplicator.

*Evaluation of stencil duplicator problems.* The instructor should encourage students to experiment on the ungraded, get-acquainted problem to determine the stroking pressure that they should apply to the styluses when drawing designs or letters and to determine how to make machine adjustments for correct placement of copy. Emphasis on the quality of the finished products should be applied to all ensuing problems. Students should become aware that it takes only limited ability to place a stencil on the duplicator and to run off copies; but that it takes ability and skill to type a good stencil, to draw illustrations and letters so that they are clear, to make machine adjustments so that the copy is placed correctly, and to have a finished product that is both clear and clean.

Items one should check on graded problems include the following:

1. Correctness of copy; no typographical errors. (When an error is made, that error is duplicated by the number of copies run off. Students should be encouraged to proofread with other students.)
2. Correct vertical and horizontal placement.
3. Clean copy; no ink spots on front and/or back of duplicated copies; margins and spaces between words and paragraphs are free of ink spots. (Tiny black dots, which may appear on the duplicated copies, may be caused by sharp prongs on a ring or by long fingernails, both of which may nick the stencils as the students write or draw on them.)
4. Originality, if students are required to select their own drawings, plan the physical layout of the problems, etc.
5. Corrections are not visible on duplicated copies.

The instructor should grade each problem separately and average them for a unit grade. The "weighting" or percentage assigned to that particular unit should be determined by the number of hours or weeks allowed to complete the unit. (E.g., if there are 18 weeks in the semester, if the class meets for 6 hours per week, and if the students must complete the unit in 3 weeks (18 hours), the average grades on the stencil duplicator unit would count three-eighteenths of their semester laboratory grade.)

*Fluid duplicator.* The general directions for this unit are the same as for the stencil duplicator unit—the students must have detailed procedures to

follow on how to type and to make corrections on a fluid master as well as detailed instructions on the operation of the fluid duplicator.

*Length of the unit.* The length of the unit is dependent upon the length of the course and the number of units included in the course. For the students to achieve skill in preparing and running fluid masters, however, a minimum of six hours should be allowed.

*General objectives.* The general objectives for the fluid duplicator are as follows:

Objective 1. To give students an opportunity, without penalty of graded evaluations (get-acquainted problem):

a. To select an appropriate touch control for their typewriters that will ensure good copy:

(1) Type several short paragraphs, using several different touch-control settings and labeling these paragraphs with the setting used (e.g., at the end of the first paragraph, typed with a touch control of "3," the students would type after that paragraph, "Touch control 3." This information is used for later comparisons.).

(2) Make several corrections, using a razor blade to remove all traces of carbon AND to blow the carbon particles away from the master and the typewriter so that they will not be pressed against the master as it is rolled through the typewriter; insert an unused piece of carbon before typing the correction.

(3) Use correction tape to correct an entire line, emphasizing that the correction tape MUST be placed directly over the previously typed line before the correction can be typed.

b. To learn to draw and to write on a master, draw two small illustrations at the bottom of the master, using a ballpoint pen for drawing one illustration and a lead pencil for drawing the other; print below each illustration the instrument used—ballpoint pen or lead pencil; label each.

c. To examine the master before duplicating and to use a white pencil, razor blade, or lead pencil to color over untyped areas where typewriter roller marks are visible and carbon spots appear.

d. To run off five copies, making vertical and horizontal adjustments for each copy as indicated in the stencil duplicator unit.

e. To examine duplicated copies for overall appearance and correct placement.

These five duplicated copies of the get-acquainted problem are then submitted to the instructor for an ungraded evaluation. These copies should be evaluated with the students, noting the touch control setting best for their typewriters, any carbon spots, and/or poorly made corrections.

Objective 2. To type and duplicate in color, using colored carbons:

a. Type master, having portions of copy in color. These portions must be typed as they appear in the copy (e.g., if

headings of a problem are to be in red, insert a STRIP of red carbon as each heading appears. The red carbon will leave a light red imprint on top of the already typed words or numbers if it is inserted as a full sheet of carbon after the initial copy has been typed.)

b. Use a lead pencil to color over carbon spots and typewriter roller marks.

c. Run off copies, making necessary vertical and horizontal adjustments for correct placement.

Objective 3. To learn to block out a section(s) on a master:

a. Type a master of a problem (e.g., a price sheet) that contains information that should not be available to all persons receiving copies.

b. Duplicate copies, making necessary vertical and horizontal adjustments and using a lead pencil to color out carbon spots and typewriter roller marks.

c. Use a piece of paper and scotch tape to paste over the unwanted section (block-out section); do not cover area with tape only; this eliminates the possibility of removing the block-out section and running additional copies later of the entire price sheet.

Objective 4. To learn to duplicate on cards and/or address labels:

a. Plan problem so that it will be within the space limitations for the finished product.

b. Duplicate copies, making necessary machine adjustments.

*Evaluation of fluid duplicator problems.* The instructor should encourage students to experiment on the ungraded, get-acquainted problem to determine the best touch control and writing instrument. Emphasis on the quality of the finished products should be applied to all remaining problems. It takes time and effort to prepare and to duplicate clean copies.

Items one should check on graded problems are as follows:

1. Correctness of copy; no typographical errors. (When an error is made, that error is duplicated by the number of copies run off. Encourage students to proofread with other students.)
2. Correct vertical and horizontal placement.
3. Clean copy; no carbon spots or typewriter roller marks.
4. Uniform darkness of copy (should not be a problem if electric typewriters are used).
5. Originality, if students are required to select their own drawings, plan the physical layout of the problems, etc.
6. Corrections are not visible on the duplicated copies.

The teacher may grade each problem separately and average these grades for a unit grade. He or she may follow the suggested "weighting" plan explained in the stencil duplicator unit.

## FILING

As a result of the paper explosion, filing supplies and equipment have changed rapidly in recent years. One area of filing that has not changed and will never change, however, is the alphabetic sequence of letters—the basis for most classification systems. The alphabetic sequence of letters is also applied each time a name and telephone number are located in a telephone directory. Even many numeric filing systems contain a subdivision based on the alphabet. For these reasons, filing is an essential unit in an office practices class.

*An introduction to filing.* Because filing can be monotonous when done on the job for several hours at a time, emphasis should be placed on the necessity for accuracy in filing and in coding the material to be filed. If materials are properly coded and are later retrieved from the file for reference, no coding decision has to be made by the file clerk when the material is refiled; the coding has previously been marked on the face of the document. If a document is misfiled, it may not be located for months, it may never be located, it may cause a company to lose money or good will, or it may even cause litigation.

Filing, whether done as a group unit or independently, requires basic information before students can file. This information is available in filing and clerical office practices textbooks, in reference books, and in vendor information booklets.

The variety of filing equipment available should be discussed. Films showing the use of some of this equipment are available. Colored illustrations of vertical and lateral files, card files, rotary files, etc., are available from vendors. This information can be collected by students while visiting office supply stores in the area (or by writing business letters asking that information be sent) and/or can be solicited by the instructor and made available for use in the classroom. This information could also be displayed on the bulletin board together with pertinent information about the equipment underlined or listed separately.

Information on filing supplies is also available from the sources listed above. Samples of file folders, tabs, "out" cards, etc., can be displayed for the students to examine.

The terminology applied to both filing supplies and equipment should be stressed. Students should learn the meaning of such terms as scoring a folder, a fifth cut, etc.

The classification systems commonly used in businesses are alphabetic and numeric or variations of these two systems. Although specific units of other classification systems may not be taught, information about them could be made available for those students wanting to learn more about them or for the students who are able to complete additional units within the allotted time.

No evaluation for a grade needs to be done on the introductory material in filing. If a graded evaluation is desired, a paper-and-pencil test on terminology could be given.

*Alphabetic filing.* A wide variety of programmed materials, workbooks, and textbooks on alphabetic filing are available. Authors of filing materials do not always agree on all filing rules, so it is necessary that all students have access to the same reference materials. In addition to alphabetic filing problems in published materials, it is also possible to include "locating" exercises from the telephone directory, city directory, and dictionary.

*Numeric filing.* Reference materials from private and government publishing agencies are available, explaining the varieties of numeric systems available and recommending specific systems for specialized needs. The numeric system can be brought "close to home" with illustrations of the numeric system applied to social security numbers, student identification numbers, and drivers' license numbers.

*Length of unit.* The combined minimum time to be spent on alphabetic and numeric filing systems should be 15 hours.

*General objectives.* The general objectives for alphabetic and numeric systems are as follows:

Objective 1. To become aware of the variety of filing equipment and supplies available.

Objective 2. To become aware of the cost of filing and the cost of filing equipment and supplies.

Objective 3. To become aware of the variety of filing classification systems used in business and government.

Objective 4. To give students an opportunity, without penalty of graded evaluations (get-acquainted problem):

a. To apply the alphabetic rules to a short filing problem.

(1) Select a short unit (approximately 20 names) to be filed; OR arrange in alphabetical order a list of 5 or 10 names that are filed together and would require the students to exhibit an understanding of specific rules.

(2) Record those names on an answer sheet.

(3) Check the accuracy of the order of the documents with the instructor or against a key.

b. To apply the numeric rules to a short filing problem. (See items 1-3 above.)

Objective 5. To demonstrate an understanding of the coding, cross referencing, filing, and retrieving of business papers in alphabetic and numeric filing systems.

*Evaluation of filing problems.* When checking the sequence of the filed documents, the instructor should mark one error for each misfiled document. One should not count off twice for one misfiled document. For example, let us assume that the correct sequence of documents is 10, 3, 41, 32, and 8 (for easy recording and checking, numbers are assigned to specific names to be filed—A. M. Davis is document 10, A. Mark Davis is 3, etc.). If the sequence recorded by a student is 10, 41, 32, 3, and 8, only the "3" should be encircled as incorrect. An error should not be marked between numbers

10 and 41 to show the omission of 3; this would be counting two errors for each misfiled document and would also be giving the student a clue as to where the document should be correctly filed. Students should be required to correct their errors before proceeding to the next problem.

For grading purposes, the teacher may assign a point (or fraction of a point) to each document in the problem. For example, if there are 100 documents to be filed, one might assign a point value of one for each document; 200 documents, one-half point, etc. After assigning a total point score to a problem, he or she could convert those points to letter grades—e.g., 96-100, A; 91-95, B; 86-90, C, etc.

The teacher may grade each problem separately and average those grades to determine the unit grade. The suggested "weighting" plan explained in the stencil duplicator unit may be used.

## TRANSCRIBING MACHINES

Itemized procedures on the correct use of the transcribing machines must be available for student use in the classroom. The instructor should use vendor information pamphlets as well as additional typed instructions to give further student assistance. The teacher should not assume anything; he or she should include such "obvious" instructions as placing only one belt or disc on the transcriber at one time. (When the belts are stored one inside another, it is not uncommon for students to try to place the entire stack of belts on the machine at one time!) The equipment and the transcribing technique are entirely new to the students, so it is essential that they begin work carefully and learn the technique of getting an "ear full" while keeping the typewriter carriage moving.

*An introduction to machine transcription.* Students should be instructed to get ready to transcribe by having erasing supplies; letterhead paper; carbon paper; envelopes, if required; kneaded rubber, which can be used to blot an error before erasing; a dictionary; and a reference manual at their work stations. If a desk drawer designed for easy assembly of a carbon pack is available, it should be used. If no slotted desk drawer is available, students should store paper supplies in three file folders—one for letterhead stationery, one for carbon paper, and one for second sheets. These folders can be arranged on their desks so that a carbon pack can be easily assembled from them.

To help the students get acquainted with the equipment and the transcribing technique, they should be required to listen through a tape, noting corrections marked on the indicator slips and the approximate length of each letter or manuscript. Unless the belt or tape contains very rough dictation (many corrections and difficult words), students should type "finished" copy the first time through. It is a waste of both time and supplies to type a document in rough-draft form first unless there is a good reason for doing so.

After listening through the entire belt, students should then "give it a try." The keys for the get-acquainted belt should be made available to the

students so that they can compare their transcription efforts with it. The instructor can also evaluate with the students their finished copy, noting problems that they may have encountered in hearing the past tense of some words, typing with uneven margins, using incorrect punctuation, having spelling errors, etc.

*Length of the unit.* The length of the unit is dependent upon the length of the course and the number of units included in the course. For the students to achieve skill and confidence in using the machine and in handling their supplies, a minimum of 12 hours should be required.

*General objectives.* The objectives for the unit on transcribing machines are as follows:

Objective 1. To review letter styles, punctuation, and grammar.

Objective 2. To demonstrate an understanding of the correct procedures to be followed in the efficient handling of supplies and equipment.

Objective 3. To give students an opportunity, without penalty of graded evaluations (get-acquainted problem):

a. To operate a transcribing machine.

b. To apply their transcribing skills on a minimum of two documents.

(1) Select documents that will require the use of an appropriate format (specific letter style or manuscript style).

(2) Require students to make decisions regarding spelling and punctuation.

(3) Check the accuracy of their transcripts with the instructor or against a key.

Objective 4. To demonstrate their ability to transcribe mailable copy.

*Evaluation of transcribing machine problems.* The teacher should establish the number of mailable letters or points that students must achieve for each letter grade. A minimum of three average-length letters should be produced for each hour of transcription. (The quantity may vary due to the complexity of the documents, the terminology used, etc.). Students should be aware of the number of points needed to achieve a specific letter grade for the unit.

The general evaluative criteria used to grade transcribed documents should be whether the document is mailable or whether it would have to be corrected and/or retyped before being mailable. Mailable and unmailable documents can be assigned points. For example, 4 points could be given if the document is transcribed without error; 3 points if the document is transcribed with only minor changes in format or wording that would not alter the meaning; 2 points if a document originally graded unmailable and assigned 0 points can be reinserted in the typewriter and corrected; 1 point if the complete document is corrected and retyped; 0 points if the document contains uncorrected errors and is not retyped.

Some specific criteria for determining mailability of a document are as follows:

4 points— 1. Copy is verbatim (slight variation permitted so long as the meaning is not changed)
2. Copy is clean and well placed
3. Punctuation is correct
4. Corrections on original and carbon are neat
5. Crowded or spread characters are neatly done
6. Words are divided according to word-division rules

3 points— 1. Minor change in wording but meaning remains the same
2. One extra space has been left between words
3. Incorrect spacing after punctuation marks, not to exceed one space and at least a partial space
4. Right-hand margin is uneven
5. Numbers are expressed incorrectly
6. Closing lines of the letter are not in correct order
7. Placement is slightly high or low
8. Some letters are blurred because of dirty keys
9. Words are divided at syllables but not according to word-division rules
10. Copy is slightly smudged

2 points—Applicable to any document in 0-point category if that document is neatly corrected but does not have to be completely retyped

1 point —Applicable to any document in 0-point category that is completely retyped in correct form

0 points— 1. Misspelled words
2. Strikeovers
3. Extremely uneven right-hand margin
4. Words are omitted
5. Words are divided incorrectly
6. Special lines are omitted
7. Carbon copies are omitted
8. Incorrect punctuation and capitalization

The instructor may total the number of earned points on the unit and assign a letter grade. If the unit is 15 hours in length and a minimum of 3 letters should be typed each hour, 90 points (2 points x 3 letters per hour x 15 hours) would equal a "C" grade; 112 points (2½ points x 3 letters per hour x 15 hours) would equal a "B" grade; 135 points (3 points by 3 letters per hour x 15 hours) would equal an "A" grade. After completing this conversion, the teacher should follow the suggested "weighting" plan explained in the stencil duplicator unit. All letters typed in this unit should be returned to the instructor so that they will not be passed on to students who have yet to pursue the unit.

## JOB APPLICATION

Looking for employment is a task encountered by all students at one time or another. Areas of major concern for potential job applicants are knowing how and where to look for employment, how to fill out an application blank, how to give an effective interview, and how to write a letter of application and prepare a data sheet.

*An introduction to job application.* Information on the areas mentioned above is available in a variety of supplementary materials published by state and federal agencies; private publishing houses; and employment agencies, both state and private. In addition, guest speakers (personnel officers), class discussions, and role-playing situations can be used. Videotapes, films, and slide/tapes stressing the do's and don'ts are also available.

Copies of several different application blanks may be secured prior to the class discussion about applying for a job. As an introduction activity, the students can then complete the application blanks as though they were applying for a job. The blanks may then be evaluated on correctness, completeness, and neatness. These blanks should not be returned to the students; the teacher should retain them for comparison purposes during the evaluation phase of the unit.

*Length of the unit.* The length of the unit is dependent upon the length of the course and the number of units included. For the students to have an opportunity to experience the entire process of looking for employment, a minimum of six hours should be allowed (from the letter of application through the employment interview and follow-up).

*General objectives.* The general objectives for the job application unit are as follows:

Objective 1. To become aware of the different kinds of employment opportunities available.

Objective 2. To be able to fill out an application blank correctly, completely, and neatly.

Objective 3. To become aware of the recommended techniques and proper conduct to be followed in seeking employment.

Objective 4. To demonstrate an understanding of the characteristics of an effective letter of application and data sheet.

*Evaluation of job application problems.* At the completion of the unit, students should be given an opportunity to complete another application blank (preferably from a different company). After the blanks have been handed in and evaluated by the instructor, both application blanks should be returned to the students—the first try and the last try—for purposes of comparison. The students should decide through group discussion which students would be hired on the basis of the appearance and content of their application blanks. The second application blank can be given a letter grade on the basis of the completeness, correctness, and neatness.

The application letters can be written for specific job descriptions selected by the students. These letters should also be evaluated on neatness, correctness, completeness, and originality. A single typographical error on

the data sheet or the letter of application should result in a failing grade. The students should be required to retype and resubmit them in order to improve their grades. These kinds of errors would likely result in students not being considered for employment and not having an opportunity to be interviewed.

If a mock interview is given to the students or to selected students, immediate feedback is important. They should be told in what ways they can improve their interview technique.

## OFFICE HOUSEKEEPING/SAFETY

Maintaining a neat and orderly work station is a skill that is needed by every office employee. The instructor should emphasize safety and orderliness throughout the semester by reminding students to return supplies to the appropriate cabinets, to close cabinet doors and file drawers, etc. These practices are essential for office safety as well as for a neat and orderly office.

In addition to safety reminders as hazards become evident during the class period, a general discussion on office safety can be helpful from time to time. Students should be encouraged to peruse the local newspapers for stories relating to business accidents, safety hazards, and lawsuits resulting from job-incurred injuries. Students can report to the class good and bad practices that they have observed in businesses. Critical-incident cases and supplementary materials from insurance companies and OSHA can also be used for class discussion.

*Length of the unit.* The length of the unit is dependent upon the length of the course and the number of units included in the course. For office safety, a teacher should allow a minimum of three hours; for office housekeeping, two hours.

*Evaluation of office safety and office housekeeping problems.* In order to have students assume some responsibility and learn to leave a work area clean and safe, one student should act as an office manager and one student as an assistant office manager for each class period or each week. During the first class period, the instructor can serve as the office manager and train one student to assist. That student is given the title of assistant office manager. The next class period or week, the assistant manager becomes the office manager and then trains another student to be assistant manager, etc.

The roles of the manager and the assistant manager can be expanded toward the end of the semester or year so that the managers can assist in proofreading work of other "employees," distributing work assignments, and assisting students by answering questions about equipment problems, etc. This assistance need not be restricted to the office manager only. All students in a unit-rotation class should be encouraged to answer questions about the operation of equipment and the assignments that they have already completed.

To be certain that all items have been checked at the end of the class period, the instructor may devise a checklist that requires the managers to check each item as it is cleaned, stored, ordered, etc. These tasks can be varied and may be dependent upon the size of the class, the kinds of units

taught, and the time of day the class is offered. These tasks could include: (1) unlocking cabinets at the beginning of the class period, (2) assisting students in finding needed supplies or resource materials, (3) checking all cabinets for orderliness, (4) checking to see that all electric typewriters are turned off and covered, (5) closing windows, (6) cleaning the sink, (7) replenishing supplies, (8) returning books, scissors, and other supplies to the proper storage areas, (9) checking to see that transcribing machines are stored properly and that all belts or tapes have been removed from the machines, (10) aligning desks and chairs, (11) greeting visitors to the classroom, (12) making announcements, and (13) locking cabinets at the end of the class period.

To evaluate the office manager and the assistant office manager on their ability to supervise the work area, the teacher may either assign a letter grade or use a check-plus, check, or check-minus grade.

## CONCLUSION

The instructor of office practices must plan a course to meet the needs of both the students and the community. To do this, he or she must determine answers to such questions as: What job-entry skills are required of beginning office workers by prospective employers in the employment community? Which of these skills need to be developed in the office practices course? Is suitable equipment available for classroom instruction? How many students should be enrolled in a section of this laboratory-type class? How long should the course be? Should the course be operated on a rotation or battery plan or a combination of the two? What learning activities will enable students to develop the job-entry skills of business offices? What evaluation procedures can be used to ensure that students are proficient in the skills they need for initial employment?

Employment surveys, follow-up studies, research findings, experimentation, advisory committees, observation—all are means that the effective office practices instructor uses to answer the preceding questions—not once, but on a continuing basis, as he or she prepares students for the world of work.

CHAPTER 17

# Evaluating Instructional Objectives in The Stenographic Area

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Since shorthand and transcription are major components of a stenographic curriculum, this chapter will concentrate on these areas in relation to appropriate elements of evaluation during the teaching/learning process. Evaluation in shorthand and transcription, as in any instructional program, is a complex process. For purposes of this chapter, evaluation will be considered as

> . . . a systematic process of determining the extent to which educational objectives are achieved by pupils [which] . . . includes both qualitative and quantitative descriptions of pupil behavior *plus* value judgments concerning the desirability of that behavior.[1]

Thus, evaluation of learners should go beyond the accumulation of quantitative measures and should include an assessment of the intellectual (cognitive domain), motor (psychomotor domain), and emotional (affective domain) accomplishments as they relate to employment in a stenographic position. (Consideration of the use of evaluation for assigning grades is left to previous yearbook chapters.) Valid evaluation must be based upon appropriate intermediate objectives which lead to the attainment of a set of terminal objectives.

## LEARNING DOMAINS

Learning activities for carrying out the intent of instruction can be classified into three categories—knowing information, termed the cognitive domain; performing certain physical movements, termed the psychomotor domain; and displaying desirable personal qualities, termed the affective domain. Various levels from simple to complex have also been identified for each of the domains.

Because of the length of the shorthand/transcription program, the degree of achievement for each of the various levels of the cognitive, psychomotor, and affective domains will vary from school to school. Also, few objectives will be exclusively cognitive, psychomotor, or affective; but one domain will have primary emphasis. In order to get a better understanding of the evaluation process, one should look at the learning process in terms

[1]Gronlund, Norman E. *Measurement and Evaluation in Teaching*. New York: Macmillan Publishing Co., 1971. p. 8.

of the primary emphasis at the various stages of learning in relation to the cognitive, psychomotor, and affective domains of learning.

*Cognitive domain.* The cognitive domain includes a hierarchy of learning levels that require the knowing of specific information (recall) and the understanding of principles, concepts, and generalizations as a basis for the higher levels of problem solving and evaluation. Objectives of shorthand/transcription dealing with the knowledge component (memorizing the memory forms or memorizing the alphabetic symbol or character for the shorthand system, for example) are classified as cognitive; therefore, student assessment must be made with appropriate instruments for measuring the knowledge components of the shorthand/transcription process. One cannot perform well in the psychomotor activities without a foundation in the cognitive domain.

*Psychomotor domain.* The psychomotor domain includes the manipulation of materials or things in acquiring a motor skill; and like the cognitive domain, skill development is from a simple imitation level to a complex automatic level. A great amount of activity and time in shorthand/transcription is given to the psychomotor activities of reading, writing, and transcribing; however, these motor skills cannot be segregated from those cognitive learnings on which the psychomotor learnings are based. Therefore, as a part of the evaluation process in a shorthand/transcription course, proper assessment must be made of the psychomotor skills as well as the knowledge in the cognitive domain. The emphasis in most shorthand/transcription courses is based on the skill tests of writing at a particular rate for a specified amount of time and sometimes timed for the rate of transcription. This assessment alone is insufficient for evaluating the progress or terminal achievement of students in a shorthand/transcription course.

*Affective domain.* The affective domain includes those personal qualities of attitudes and feelings desirable for occupational employment. Because people show feelings and attitudes in different ways, assessing a student's feelings and attitudes is not an easy task—certainly not one for translating into a grade. Teachers in shorthand/transcription need to identify those behaviors that are desirable for secretarial employment and then provide means by which students can demonstrate that they possess those essential behaviors. Although the affective domain includes different levels, each succeeding level deals more with the degree of internalization of the feeling or attitude; for example, at the lowest level the student is given the necessary information concerning the appropriate response and is only required to be passively aware of the desired trait; at the highest level, the student's behavior reveals that this trait has become an integral part of his/her total manner of responding.

## TERMINAL OBJECTIVES

Since the main purpose of classroom teaching involves the positive change of student behavior, the instructional objectives established by the teacher become a critical part of the teaching/learning process. It is only in

relation to these stated objectives that the progress and achievement of students can be interpreted to students as well as to others. One cannot prepare a valid evaluation or measure of a learner without having identified what objectives/outcomes are desired.

In a learner's progress towards the end-of-course or terminal objectives, the teacher must be aware of the different components involved at the various stages of learning and select appropriate evaluation techniques. Merely assessing the psychomotor skills of recording speed and typing speed, for example, are not appropriate for every stage of learning in shorthand/transcription. Yet, the teacher should develop some means of assessing the progress of students from the beginning of the course so that prescriptive measures can be taken to insure learning. Each stage of learning has its own specific objectives which are sub parts of the terminal objectives.

When the teaching/learning process of shorthand/transcription is viewed in terms of final product preparation (terminal objectives), then the various intermediate objectives can be established and assessed in a student's progress towards the terminal objectives. The only valid terminal objectives of a shorthand/transcription course, therefore, are found in the competencies needed by an office employee utilizing shorthand and transcription.

*Stenographic competencies.* In establishing the terminal objectives of a stenographic program including shorthand and transcription, it is first necessary to establish those competencies needed by the learner in order to obtain employment in a business office. In summarizing research studies dealing with competencies needed by office workers, Popham, Schrag, and Blockus list the following tasks:

1. Understand words and their correct use in correspondence.
2. Hear phonetic sounds and record them in symbols or abbreviated longhand.
3. Take dictation from individual.
4. Typewrite from dictation, shorthand notes, and rough drafts.
5. Transcribe the dictation, using correct English and spelling, and prepare various types of letters and business forms.
6. Use specialized vocabulary—technical, medical, and legal for higher-level stenographic positions.
7. Take notes given for instructions and follow the instructions.
8. Communicate verbally with superiors and with fellow workers.
9. Adapt to routine tasks.
10. Analyze incoming mail to identify the name, title, and address.
11. Proofread letters and reports typed.
12. Make corrections in letters and reports.
13. Understand the operation of the business.
14. Understand the organizational pattern of the business.
15. Understand and follow selected office procedures.
16. Follow an established flow of work.[2]

[2]Popham, Estelle L; Schrag, Adele Frisbie; and Blockhus, Wanda. *A Teaching-Learning System for Business Education.* New York: McGraw-Hill Book Co., 1975. p. 203.

From this list, the following terminal objectives in the psychomotor domain can be identified for a shorthand/transcription course:

- Hear phonetic sounds and record them in terms of the shorthand system.
- Typewrite from dictation and shorthand notes.
- Transcribe the dictation, using correct English and spelling, and prepare various types of memos, letters, reports, and forms.
- Proofread material transcribed.
- Make corrections in material transcribed.

The following terminal objectives identified by researchers can be classified as affective learnings:

- Understand words and their correct use in correspondence.
- Communicate verbally.
- Adapt to routine tasks.
- Follow an established flow of work.
- Take notes given for instruction and follow the instructions.
- Understand and follow selected procedures.
- Recognize and meet time demands.

The psychomotor and affective domains are emphasized in the terminal objectives of shorthand/transcription. However, these objectives must be based on a sound foundation of cognitive, psychomotor, and affective learnings. The teacher's responsibilities lie in the selection of appropriate methods and materials so that students can achieve the necessary competencies; intermediate and terminal evaluations should include appropriate means of assessing the attainment or lack of attainment of the established objectives.

The preceding listings have been identified as the essential components of a secretarial program. The next question is: What degree of performance is needed by the student in order to meet the standards of employment?

The lack of valid standards for each of the tasks performed by office workers has left the terminal instructional objectives to estimates in many instances. After an investigation of actual dictation rates in offices, Olinzock concluded:

> The current practice of establishing terminal speed goals such as 80 words per minute for five minutes with 95 percent accuracy are not representative of office standards. Terminal goals consisting of multiple speeds at varying durations should replace current dictation speed standards. Accuracy standards should be based on usability.[3]

As further evidence of a different view concerning terminal objectives for recording rates, Olinzock also identifies the following standards with the percentage of dictations that require that level:

100 percent of dictators—ability to take 216 words per minute for one-half minute; 124 wpm for 3 minutes; and 85 wpm for 5½ minutes

75 percent of dictators—ability to take 132 wpm for one-half minute; 88 wpm for 3 minutes; and 68 wpm for 5½ minutes.[4]

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[3]Olinzock, Anthony A. *An Analysis of Business Dictation*. Doctor's Thesis. Pittsburgh: University of Pittsburgh, 1976. p. 108.

[4]*Ibid.*

Other findings of the Olinzock study that provide standards for terminal objectives in shorthand/transcription include the following:

1.65 average syllabic intensity
157 gross words as the average length of letters
68 percent of the words analyzed came from the first 1,000 commonly used words.[5]

Additional research is needed to determine competency levels in businesses for other factors in order that realistic learning objectives can be established and evaluated. Combining the essential psychomotor tasks performed by office workers and the criteria presented above, the terminal objectives with standards would be as follows:

| *Task* | *Standard* |
|---|---|
| Recording rate | Multiple speeds; varying durations |
| Transcribing rate | Valid standard undefined at present |
| Transcribing correctness | Usable |
| Proofreading | Undefined; sufficient to make transcript usable |
| Making corrections | Undefined; sufficient to make transcript usable |

Each of the affective domain learnings would need to be identified as to the level acceptable by the instructor—the degree of student performance will depend upon the time devoted to the study of shorthand/transcription and should be accumulated over a period of time.

*Evaluation of terminal objectives.* Two different types of measurements may be used for assessing the terminal achievement of students in shorthand/transcription—the dictation test and the production test. In the dictation test, the student is given a letter, memo, or other correspondence for a specified time at a specific rate of dictation; then the transcript is prepared within a defined period of time. The degree of accuracy of the transcript (an indirect measure of the recording task) may also be used for performance assessment. In the production test, the student is given a series of letters at a rate slightly below his sustained speed rate and is then given a defined period of time to transcribe those letters. Using the standard identified by Olinzock, the final copy should be "usable."

Copy difficulty poses a problem for assessing the attainment of terminal objectives with dictation tests and production tests. Much research is needed to determine factors that have a bearing on the difficulty of copy. Merely selecting a letter with a syllabic intensity of 1.40 is not adequate for establishing comparability of copy. Olinzock found that the average syllabic intensity of correspondence included in his study was 1.65;[6] Reese and Smith, 1.54.[7] Therefore, a dictation test with a 1.40 syllabic intensity would underestimate the competency level of a learner in relation to office requirements. When assessing the recording ability of students, other cautions

[5] *Ibid.*

[6] *Ibid.*

[7] Reese, Don, and Smith, Ray. "Gems of Shorthand Wisdom." *Journal of Business Education* 48:214; February 1973.

should be exercised in the marking of the transcript. Errors for the following may be marked: misspelled work (may be lack of proofreading or lack of consciousness of error), spacing, strikeover (carelessness), punctuation, capitalization, incorrect word transcribed, and others.

If the purpose of the dictation test is to assess the recording ability, then special consideration should be given for a valid measure of that objective. In order to assess the terminal achievement of students, the instrument should be valid and reliable. Research is needed to determine means of identifying the validity and reliability of test instruments for assessing terminal recording and transcribing achievement. Vocabulary level appears to have a bearing on the difficulty of copy; however, additional work is needed to refine this factor in terms of copy difficulty. Publishers of shorthand systems should be responsible for providing valid and reliable achievement instruments.

Evidence of valid transcription rates are lacking. As indicated by Erickson in his study of 300 office workers, even the typing requirements of 50-60 wpm were guesses and therefore invalid terminal standards.[8] The transcription process can be timed, and rates established for transcription—normally, a transcription rate of at least one-half that of straight-copy typing rate is thought to be acceptable. Research of actual office performance is needed for the identification of acceptable transcription standards.

The correctness of transcript involves the student's ability to proofread, recognize errors, and make the necessary corrections. The standard as required by the teacher may be 100 percent as dictated or something less. Terminal assessment within the school setting should be based on activities and standards of office workers since students studying shorthand/transcription have office employment as a personal goal.

## INTERMEDIATE OBJECTIVES—STAGES OF LEARNING

The terminal objectives identify the end-of-course performances, whereas the intermediate objectives identify shorter range objectives; and over a period of time the attainment of the sets of intermediate objectives will result in employment competencies. The time span in the shorthand/transcription learning can be viewed as three stages. Stage I involves the initial introduction of the parts of the shorthand system with some emphasis on recording, transcribing, proofreading, and correcting; Stage II concentrates on the refinement of recording and transcribing skills with an ever-increasing vocabulary plus a continued effort on proofreading, correcting, and other grammatical skills. Stage III involves the production of office communications which are usable (mailable)—letters, memos, reports. Emphasis will be on the quantity and quality of production within a defined period of time.

Affective learning in Stage I, as well as the other two stages, involves such factors as establishing standards for neatness, promptness, adapting to

[8] Erickson, Lawrence W. *Basic Components of Office Work—An Analysis of 300 Office Jobs.* Monograph 123. Cincinnati: South-Western Publishing Co., 1970. p. 11.

a routine for completing and handing in work, etc. Check sheets can be devised for recording the demonstrations of desirable traits by each student; and suggestions for improvement in the affective domain can be monitored throughout the study of shorthand/transcription. The assessment of these affective learnings should vary according to the stage of learning in terms of the degree of behavior demonstrated by the student and the amount of time allowed for the shorthand/transcription program.

The following paragraphs describe the various elements of learning with comments about appropriate evaluation for the three stages of learning. The intermediate objectives provide a basis for diagnosing the learning process for prescriptive activities in order to bring about the ultimately desired student behavior.

*Stage I.* Students coming into a shorthand/transcription course should have as prerequisites a typing rate of at least 45 wpm and familiarity with business correspondence—letters, memos, and manuscripts—with acceptable proofreading and correcting abilities. Stage I involves the initial exposure for the learner to the various elements of the shorthand system—sound concept, alphabet, memory forms, and abbreviating devices, such as word beginnings and endings. While the cognitive learnings at this stage are basically at the lower levels of the domain (recognition, recall, analysis), students will be engaging in the lower levels of the psychomotor domain—imitation, manipulation, and some degree of precision. Continued appropriate practice will then result in the attainment of the higher levels of the psychomotor domain—automatic response to the spoken word—as well as the higher levels of the cognitive domain including decision making (encoding of a word from the spoken sounds). Emphasis in this stage should be on a practiced vocabulary. Reading rate and error rate, identification, translation, and transcription are all appropriate activities; and both pencil-paper tests and performance tests are appropriate for assessing the understandings and skills of students at this initial stage of learning.

At the present time, assessment of cognitive learning receives the least amount of attention; special attention should be directed to assessing the cognitive learnings for each lesson or series of lessons in order that prescriptive activities can be used to bring the learning for each student to an acceptable level. A student's knowledge will be the basis for additional skill development. Nonassessment of the cognitive learning on a regular basis, such as each lesson, results in not knowing the degree of learning for each student and may account for much of the cause of the high failure rate among shorthand learners. Research studies should be designed to provide information about this aspect of shorthand learning.

SOUND CONCEPT. The first part of Stage I should deal with the sound concept and the relationship of sounds to the parts of the shorthand system. Because of the differences in sound perception of students entering the shorthand course, the teacher must be sure that sound awareness is developed. The shorthand system is subdivided into various elements that stand for certain speech sounds and therefore must be stored in the brain for instantaneous use—whether the stimulus is the actual shorthand outline or

the spoken word sound(s). Since the basic textbook is the main source for student practice, it is essential that authors provide practice material that contains this important aspect of shorthand study—initially and throughout the learning time.

Appropriate assessments of sound concept can be by pencil-paper tests in which the student identifies words from phonetic representations or identifies the sounded letters of a word. Since the student will be making responses to spoken sounds (words), the student needs a high degree of mastery in discriminated sound perception—reading at first for confirmation and writing later as the student develops his/her psychomotor skill of recording. This basic concept is essential if students are expected later in their study to be able to transfer the shorthand system parts to words that have never been studied; the ultimate goal is to have the student competent enough to record any spoken word so that a transcript can be prepared.

ALPHABET. Once the sound concept has been introduced, study will involve learning the shorthand alphabet. Again, certain symbols or characters will be representing speech sounds; for example, a *c* may take the sound of *s* or *k* and is therefore represented by that sound symbol/character. Complete mastery of the alphabetic symbols/characters is important since all other learning is based on them. The spelling/pronouncing activities during Stage I is an attempt to confirm that the student has learned the alphabet and can associate the symbols/characters with sufficient competency to recognize the correct word.

Attention should be given to the basic alphabet of the shorthand system since many words written in the office are composed of the basic alphabet. Simply because the student has learned the alphabetic symbol/character does not mean that she/he can automatically write alphabetic words.

Evaluation concerning the alphabet mastery can be by pencil-paper tests in which the student identifies the symbols/characters for the basic alphabet of the shorthand system; writes the symbols/characters from written or spoken response; or reads aloud, spelling and pronouncing individually. Assessment of the basic alphabet mastery is important for each student to progress to the next phase of learning. Without the mastery of the basic alphabet, the student will be lost. Merely having the students spell and pronounce as a group does not provide the confirmation that *each* student has attained the necessary level of proficiency needed to function at a higher level of learning. Slides or flash cards can be used effectively in the practice sessions or for assessment of the alphabet competency.

After the student has mastered the basic alphabet of the shorthand system (or part of the alphabet if the shorthand text introduces a few symbols at a time), then the student learner is ready to advance to the next phase—seeing the various symbols/characters blended together to form words; alphabetic at first, then memory forms and theory words. Each type poses a different learning problem for the learner.

ALPHABETIC WORDS. Alphabetic words, for example, can be classified into two types—those that use the basic alphabet for sound representation and those that omit certain vowel sounds peculiar to the shorthand system

(short vowel sounds, obscure vowel sounds, etc.). Students should probably be introduced first to the "pure" alphabetic words and gain some competency in their use before being introduced to the second type. For the beginner in shorthand, the recognition of the blending of characters/symbols is not automatic but is one that deserves special attention on the part of the teacher. Having students spell and pronounce isolated words or words within sentences provides confirmation that students are mastering the blending of these shorthand symbols/characters to form words—a form of assessment. Assessment, however, must be on an individual student demonstration basis, although practice may be by the group method of spelling/pronouncing.

Practice material used after the introduction of a set of new learnings that include additional elements of the shorthand system tends to "clutter" learning. For example, if three new alphabetic symbols/characters are the focus of a learning segment, then the immediate practice material should concentrate on words that use these symbols—having other new learnings such as new memory forms or phrases will detract from the primary learning emphasis and result in less than satisfactory results for the majority of students. Materials should be provided that integrate the new and previously learned elements; however, the purpose of each exercise should be identified. Exercises and practice should be designed to accomplish definite intermediate and terminal objectives.

MEMORY FORMS. Memory forms are those outlines used in shorthand systems to represent a word or words. For example, in Century 21, these are called Speedforms; in Gregg, Brief Forms; in Forkner, Abbreviated Words. The outlines for these words provide a time-saving function during the recording activity since each is represented by fewer strokes than if it were written as sounded; however, the memory load for the learner is increased. The student must commit to memory these words in order to be able to use them effectively. Research has shown that a high degree of mastery is needed with these memory forms. If students are to be able to use these memory forms, the practice materials must include *each* in a manner that will accomplish the objective of student mastery of these forms; this would include periodic recycling of each in the practice materials. Memory forms must be mastered in order that plural, past tense, and other theory elements may be added to form derivatives.

THEORY WORDS. Theory words are those outlines that utilize an abbreviating device for a group of words; for example, word beginnings and word endings. The theory word is far more complex than a memory or alphabetic word for the learner. First, the introduction of an abbreviating device such as the word ending *-ing* makes possible an almost limitless number of words for use. Some words may have the word ending *-ing* plus one or more other abbreviating devices in addition to alphabetic sounds or previously learned memory forms. Although the student has been introduced to the alphabetic symbol/character and recognizes it, it does not mean that an automatic response will be made when the *-ing* sound is seen or heard. Because of the complexity of the theory words, authors have a responsibility to construct

materials that will allow a progression from the simple to complex. Research studies dealing with a controlled vocabulary appear to indicate positive results in student accomplishments. Additional research is needed in this area.

Although the purpose of the theory points are to shorten the writing time, each theory point increases the memory load and requires a sufficient amount of time for mastering the abbreviating device in selected words. Time and practice are needed in order that students can perform each abbreviating device at the synthesis and evaluation levels of the cognitive domain—the formation of new outlines using these theory points; however, this level of learning cannot be expected until the latter part of Stage II. Stage I, for example, should concentrate on the lower cognitive and psychomotor levels of learning in relation to theory and alphabetic words and, therefore, be restricted to a specified vocabulary. Also, materials and practice must be designed to insure a systematic learning cycle to accomplish the objectives of theory mastery and performance appropriate for each stage of learning.

EVALUATION. Various evaluation techniques should be used at different phases of Stage I depending upon the objectives of the learning. For example, a pencil-paper test would be appropriate for assessing a student's knowledge of phonetic spellings during the initial sound concept learning; another technique would be to pronounce words and have the students indicate the phonetic sounds; another, to give a paragraph expressed in phonetic representations and have the students translate into English. This type of assessment can provide evidence of the degree of attainment of the sound concept by each student.

Since a mastery level is needed for the alphabetic symbols/characters, pencil-paper tests or flash cards/slides can be used for confirming the recognition of the symbols/characters. Reaction time is of importance and, therefore, some assessment whereby time for reaction can be controlled is best. Pencil-paper tests do not allow for the control of response time as well as flash cards or slides. If the symbols/characters are being written, then instruments need to be provided for the actual writing of the symbols/characters—the three characteristics (size, writing direction, straight or curved) of symbols should be used in the marking of an outline as correct or incorrect. Since each symbol/character is different, students need to be assessed on the correctness of writing each symbol before additional work is completed.

Once the student has been introduced to words, then a variety of techniques can be used for evaluation of the cognitive and psychomotor domains that include the following:

Individual timed oral reading—number of words read per minute; number of errors

Timed transcribing—number of words transcribed; number of errors

Timed transcribing with error correction—number of words transcribed

Word lists printed or dictated; shorthand to words or words to shorthand; sampling of words from those in a lesson or those completed up to a particu-

lar lesson; memory form mastery that would include all memory words; theory mastery with a sampling of words studied or new words with the use of the theory studied

The purpose of the word list test must be established by the teacher in order to provide the criteria for marking an outline right or wrong. If the intent of the word list test is to assess the student's ability to write the appropriate symbol for the abbreviating device for *-ble* (word ending), then only that part of the outline should be graded. Marking the outline as "wrong" because of size, placement, or several other reasons will tend to confuse the student. If the intent is to have the student write the outline according to the dictionary outline, then the correct one would be the dictionary outline only. The purpose for giving the word list test needs careful attention on the part of the user; the word list test performs a valuable service when used properly.

Since students will be performing at the lower levels of the psychomotor domain of learning, assessment of the recording of shorthand is appropriate. The transcript usually serves as the evidence of the recording—and this results in an indirect manner of determining the recording ability. Therefore, the teacher should mark the transcript according to two different types of mistakes—those related to shorthand (wrong word, omitted word, etc.) and those related to spelling, proofreading, capitalizations, and similar mistakes. In this way, students can receive feedback in terms of their accomplishments, and weak areas can then be identified for further refinement.

Transcription ability in terms of speed of transcription and error correction can also be assessed during Stage I. Transcribing from textbook plate notes, student notes, or from material on visual aids can be used effectively for assessing the progress of students in the attainment of a satisfactory level of performance in Stage I.

Research is needed to determine a profile for various types of students and the achievement levels possible within a specified period of time. For example, Grasser found that students needed an average of 171 minutes of dictation practice to progress from 60 wpm to 70 wpm (3-minute dictations); and an average of 188 minutes of dictation practice to progress from 70 wpm to 80 wpm.[9] Time studies on the various facets of learning and the normal time required for learning would yield valuable information for shorthand study.

At the end of Stage I learning, an assessment should be made on the cognitive and psychomotor domains of learning appropriate for shorthand and transcription. If periodic evaluations are made throughout the stage of learning with prescriptive activities for relearning and then confirmation of the attainment of a satisfactory level of performance, the assessment at the end of the stage should be satisfactory. Unsatisfactory performance should be corrected with prescriptive activities and further assessment before the student is permitted to continue to Stage II.

[9]Grasser, Nancy. *Dictation Practice Time Needed by Intermediate Shorthand Students To Increase Dictation Speeds.* Master's thesis. Knoxville: University of Tennessee, 1972. p. 51.

*Stage II.* During Stage II, the learners should have opportunities to expand their vocabulary level and to recycle through the system parts—alphabet, memory forms, and theory elements. Reinforcement of vocabulary should be an integral part of this stage. The objectives for Stage II should be those of the higher levels of cognitive and psychomotor learnings. In this stage, students should receive additional practice on English skills, proofreading, and transcription. The recording rates and length of time should be extended in accordance with the time for development. Timed transcriptions can be taken from textbook notes, students' notes, or visual aids such as slides or filmstrips for assessing individual transcription achievement. Work habits and traits should continue to be monitored.

Dictation tests used for assessing speed attainment for various time periods need the teacher's careful attention. Merely using 1.40 syllabic intensity as the criterion for selection is not adequate for assuring that different tests are comparable and, therefore, provide a valid measure of student progress. Additional research is needed to determine copy difficulty and to develop valid and reliable instruments for this important skill assessment. A variety of factors such as vocabulary level, spelling, punctuation, length of sentences, etc., need further identification as they relate to the copy difficulty. Research studies reporting student achievement also need statements concerning the reliability and validity of the instruments in order for the interpretations to have meaning that can be generalized. Caution should also be used when transcripts are marked so that the correctness indicated is consistent with the objective of the activity. Shorthand and nonshorthand errors should be separated and reported on the copy separately.

*Stage III.* Stage III learning of shorthand transcription is the culminating experience and should include the production of usable copy of the different types of business communications—letters, memos, reports—at an acceptable production rate. Emphasis should be on the simple to complex activities —from dictation of two or three letters with simple parts to more complex letters with tabulations, carbons, envelopes, punctuations, spelling, etc. Even though this stage of learning is the culminating experience that integrates all previously learned cognitive, psychomotor, and affective domains, effort should also be exerted in refinement of proofreading skills and decision making. The activity and atmosphere should resemble that of a real office situation. Office-style dictation should be a part of this production stage.

Assessment at this stage of learning should follow a simple-to-complex pattern in that the first assessment after practice should be of the simpler type of work—several letters of the simplest types dictated at a rate within the range of the students and transcribed into usable form at an acceptable rate. Timing of the transcription process is essential for each individual. Later production tests can involve more complex decisions on the part of the student learner until an acceptable achievement level is demonstrated. The final attainment of this stage should be consistent with requirements for employment.

CHAPTER 18

# Evaluating Instructional Objectives in Typewriting

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Evaluation in typewriting instruction encompasses two principal areas: (1) the efficiency and effectiveness of the instructional program and (2) learner performance. The first section of this chapter pertains to the assessment of the effectiveness and efficiency of a typewriting program. The second section deals with the use of objectives in the evaluation of student achievement in the typewriting program. The third section contains a model for determining periodic grades for typewriting students.

## ACCOUNTABILITY IN AN EFFICIENT AND EFFECTIVE TYPEWRITING INSTRUCTIONAL PROGRAM

Year after year, more students enroll in beginning typewriting than in any other business course offered in the secondary schools of the United States. A large portion of the business education funds budgeted for equipment, instructional personnel, and service contracts is allocated for typewriting instruction. The need for effective typewriting instruction in the common school program is undeniable. The need for proficient typists in the business and professional world both now and in the years to come can be readily documented. Typewriting as an auxiliary vocational skill assumes increasing importance as the use of computer terminals becomes a common practice in many professions. The personal-use values of typewriting for individuals who have attained an adequate skill level are undisputed.

Since typewriting instruction is an essential and permanent part of both the business and general education curriculum, it is appropriate—indeed necessary—that this instructional area be subjected to close scrutiny in the realm of accountability. Why are so many students from typewriting programs in the common schools failing to meet the already marginal requirements established by employers? Why must employers of large numbers of typists resort to in-service training programs to bring their clerical workers to the proficiency level required in their firms? Why are students from beginning typewriting courses, some of which are as long as one year in duration, unable to meet the demands of an intermediate or advanced typewriting course in a postsecondary institution? Why are numbers of students who have had typewriting instruction not using typewriting for personal-use applications?

Postsecondary typewriting instructors are often dismayed by the sizable group of students who have "satisfactorily" completed beginning type-

writing courses and yet who cannot typewrite by touch; who type in the 20-words-per-minute range; who do not possess even the simplest and most routinely used typewriting knowledge, such as the number of spaces left after a period when it is used as a terminal punctuation mark; and who are unable to type a simple personal business letter in acceptable form. Such students, many of whom are well aware of their poor foundation in typewriting, are often the first to suggest that they repeat beginning typewriting —a deplorable practice when one considers other curricular demands upon a student's time and the repetitive use of expensive facilities and instructional time.

Administrators, supervisors, and business education teachers must implement accountability techniques in their typewriting instructional programs in order to ensure learning activities that will enable typewriting students to achieve maximum proficiency levels in an efficient and economical manner. The questions that follow might be used profitably as a discussion and/or evaluation guide for those who are genuinely interested in the ultimate goal of accountability—maximum learning in the typewriting laboratory at a reasonable cost.

*1. Is the learning system being used for typewriting instruction one that produces typists with sufficient skill to use this tool in both personal and vocational typewriting activities?* A variety of learning patterns may be found in typewriting classrooms. Whether typewriting instruction is offered in a conventional classroom group system or in an individualized learning system, achievement must be measured against desired objectives to determine the efficacy of the system. A system characterized by high dropout rates, low achievement, insufficient supervision by qualified instructors, and inappropriate learning resources for the system in use suggests the need for restructuring that system or adopting a different one.

*2. Have clearly stated objectives based upon carefully assessed needs been established for the typewriting instructional program?* If administrators and instructors are to be held accountable for an efficient and effective typewriting program, there must be clear-cut goals against which results can be measured. Such goals must be based on both the personal-use typewriting skills needed by all students and the vocational typewriting skills needed by students who intend to use them in their occupations. The goals established for personal-use skills should be inclusive enough to provide sufficient skill for those students who later decide to use the skill in a vocational capacity, a practice that occurs frequently.

For effective learning, the long-range and short-range goals established for typewriting instruction must be evident and meaningful to students pursuing learning activities. Typewriting students who know why they are performing specific learning activities learn more effectively than those who perform activities simply because their instructors tell them to do so.

*3. Have realistic standards been established to ensure that the typewriting instructional program will meet the needs of both personal-use and vocational typewriting students?* Minimum standards of achievement must parallel minimum skills required of beginning employees in the employment

community. Standards for beginning typewriting should be the same for both the students who are taking it for personal-use skills and those who plan to continue typewriting for vocational purposes. Curriculum designers who provide *separate* personal-use typewriting courses as an extracurricular activity on a pass-fail basis are generally not doing students a favor. Three factors should be taken into consideration in such instances. First, vocationally oriented students have the same need for personal-use skills as do nonvocational students. Second, students who take typewriting to attain personal-use skills often find themselves using typewriting vocationally. (This seems to be especially true for college-bound students, who often use typewriting skill in part-time employment to finance their education.) Third, students who may attain only marginal skills in a separate personal-use typewriting course with relaxed standards may not feel comfortable enough at the typewriter to use the skill for the personal-use writing job at hand.

4. *Are students encouraged to use their personal-use typewriting skills in their school work?* If one of the primary goals of typewriting instruction is to provide students with personal-use skills, then students who have completed such instruction should be expected to use their typewriting skills as they pursue learning activities in other classes. Teachers in all academic areas should insist that students who have had typewriting instruction type assignments that require extensive writing.

5. *Are facilities made available at convenient times during the school day for students who have had typewriting instruction to type personal-use jobs?* If one of the objectives of typewriting instruction is to learn personal-use skills that can be helpful in other school work, then adequate facilities must be provided at convenient times during the school day for students to type reports, manuscripts, and other appropriate assignments. Students may have neither the facilities nor the impetus to type such assignments at home.

6. *If beginning typewriting is offered at the middle school or elementary school level, is there clear evidence that students from such programs make use of the skill?* If a majority of the students who take typewriting at an early point in the curriculum do not use the skill immediately after such instruction on a regular basis for extensive written work in school and in their personal lives, such an educational experience becomes extremely costly in both time and money—costs for which students and taxpayers receive little benefit.

7. *Is the curriculum level at which beginning typewriting instruction is offered one that ensures maximum achievement in an expedient and economical manner?* Business educators and administrators should take into consideration these factors when they decide at what level in the curriculum to offer beginning typewriting instruction:

   a. Will a majority of the students have attained the physical and mental maturity at this level in the curriculum to learn the knowledge and skills as easily and quickly as possible?

b. Will the inclusion of typewriting instruction at this level necessitate unnecessary duplication of facilities and instructors?

c. Will qualified typewriting teachers be available at this level in the curriculum to instruct students?

d. Will offering typewriting instruction at this level complicate placement in advanced classes, particularly if there is a lengthy interim during which students do little or no typewriting?

e. Will students make sufficient immediate use of the typewriter in their school work to justify beginning typewriting instruction at this level?

f. Will sufficient learning time be available at this level to ensure that students will develop enough typewriting skill to actually use it for extensive writing projects in their school work?

*8. Are only adequately prepared instructors used in the typewriting program?* For effective learning to occur in the typewriting program, teachers must (1) understand how both perceptual knowledge and motor skills should be developed, (2) have a knowledge of the personal-use and vocational needs of typewriting students, (3) be able to diagnose learning problems and suggest appropriate remedial activities, and (4) be able to select appropriate equipment and learning resources for the typewriting laboratory. Through examination of research findings of others and action research in their own classrooms, instructors need to determine suitable methods to (1) introduce the keyboard, (2) develop basic typewriting skill, (3) present typewriting problems, and (4) develop production skill—the ultimate goal of typewriting instruction.

Because teachers are able to type well does not mean that they are capable of teaching typewriting well. Effective typewriting teachers need academic preparation in teaching typewriting as well as supervised practice in implementing methods in the classroom.

*9. Are adequate facilities available for efficient and effective learning in the typewriting laboratory?* Obviously, typewriting laboratories need to be equipped with up-to-date typewriters in good working order. This necessitates justifiable and carefully planned replacement schedules. It also requires suitable maintenance programs, including instruction that will encourage students to implement preventive maintenance practices.

To reduce the fatigue factor, improve techniques, and facilitate motion economy, typewriting laboratories should be equipped with work stations that have adjustable typewriter pedestals and working space both to the left and right of the typewriters, adjustable chairs, and storage space for supplies (preferably a compartmentalized stationery drawer). The work stations should be arranged so that students and the instructor can get to each work station without bothering individuals at surrounding work stations and so that all students can see the instructor as he or she demonstrates. The typewriting laboratory should also contain a demonstration typewriter and stand; a timer; a stop watch; a wall clock with a second hand; a pencil sharpener; a paper cutter; an overhead projector; a conveniently located projection screen; and sufficient chalk board, bulletin board, and storage space. There should also be enough light to do close work for extended

periods of time. To ensure safety and efficient layout, the laboratory should have a sufficient number of strategically located electrical outlets. If duplicating equipment is located in the typewriting laboratory, counter space and a sink are also essential.

*10. Are adequate learning resources available for typewriting students and instructors?* A suitable typewriting textbook at each typewriting station in the laboratory is, of course, taken for granted. Unfortunately, equally important reference books such as English-usage reference manuals, word books, dictionaries, and Zip Code directories are often not readily available. The habitual use of these reference materials should be a "must" for typewriting students.

In laboratories where independent learning systems are in use, only tested materials especially prepared for such systems should be used. A conventional typewriting textbook and informal teacher-prepared assignment sheets are not a satisfactory substitute.

Overhead transparencies, slide-tape presentations, and loop filmstrips are invaluable aids in the typewriting laboratory. Typewriting students must also have access to typewriting paper, typewriting erasers, pencils, envelopes, and—when appropriate—carbon paper, stencils, spirit duplicating masters, correction aids, letterhead stationery, and printed forms.

*11. Is the length of the learning period provided in the curriculum sufficient for a majority of the students enrolled to accomplish minimum skills needed for both personal-use and vocational typewriting?* The length of the typewriting program is usually arbitrarily arranged in units such as quarters, semesters, or trimesters. Vocational students generally enroll in a sufficient number of such units to meet the objectives of their typewriting programs. Students who are enrolled in separate beginning personal-use typewriting courses, however, sometimes pursue an abbreviated or concentrated course in a summer session, during an evening school program that may have one or two sessions a week, or during an activity period that may meet just two or three days each week. Students who complete such courses should be evaluated carefully to ensure that they are meeting the minimal requirements necessary for them to use the skill in personal-use applications. Courses such as those just mentioned often produce a number of students who not only cannot use the skill personally, but who must also repeat beginning typewriting instruction if they later decide to enroll in an intermediate course.

Students who enroll in open-entry, open-exit programs in an individualized learning system should be observed and counseled by a knowledgeable learning facilitator so that they work toward achieving optimal performance levels, not just the minimal objectives established for learning activities within each unit.

*12. Is the amount of time a qualified instructor is available to work with students sufficient to ensure meaningful learning activities for typewriting students?* Fortunately, the days are over when the instructor "teaches" typewriting through a glass partition as he or she simultaneously "instructs" a bookkeeping course (though the *incorrect* use of individualized

learning systems may cause a reverse trend). Curriculum patterns still exist, however, where typewriting instructors must teach beginning, intermediate, and/or advanced typewriting during the same class period. When there are several students in such a class, there can be considerable wasted effort and time by both students and instructor. The wise use of a carefully selected individualized learning system may alleviate this problem. When such a system with appropriate instructional materials is adopted, it is possible for intermediate and advanced students to pursue learning activities simultaneously if a sufficient number of learning facilitators, including at least one trained typewriting teacher, are working with students at all times. (The individualized learning typewriting laboratory should not be established with the idea of substituting a teacher's aide for a trained typewriting teacher, thereby freeing the latter to instruct another class.) Because of the need for constant observation, beginning typewriting students, whether in an individualized learning system or a conventional group learning system, warrant the *undivided* attention of a qualified learning facilitator or instructor.

*13. Are concerted efforts being made by parents, instructors, administrators, counselors, and prospective employers to motivate students to achieve at optimal levels in the typewriting program?* Little motivation is necessary to get students to enroll in typewriting courses. After the novelty of operating that "neat" electric typewriter has diminished, many adolescents are in need of constant motivation in order to pursue the drill work, the problem-solving activities, and the production practice necessary to achieve optimal levels of performance.

Although instructors can, through good instructional practices, do much to motivate their students, they cannot do the job alone. Every participant in the educational experience (which ideally includes the parents and prospective employers) must provide the encouragement and counseling that will inspire students to perform at their best in the typewriting instructional program. The typewriting instructor must help students (1) set achievable short-range goals for each learning activity, (2) record progress for various types of learning activities, (3) compare their progress with their goals, and (4) examine the effectiveness and efficiency of the means they are using to achieve such goals.

Typewriting instructors should guard against the use of group competitive devices for motivation. Such devices are helpful only when every participant has a reasonable chance of succeeding. Unfortunately, this is not usually the case in the typewriting laboratory. Also, group competitive devices often put undue emphasis on less important activities such as straight-copy typing, while they deemphasize more important objectives such as production typewriting competencies. Furthermore, such devices have the overall effect of motivating the students who need it least—the good typewriting students. Such competitive devices may well have both a devastating and an embarrassing effect upon those in dire need of motivation—the marginal and poor students.

## THE USE OF OBJECTIVES IN THE EVALUATION OF STUDENT ACHIEVEMENT IN THE TYPEWRITING PROGRAM

The major purposes of evaluation activities in any learning situation are (1) to determine progress toward both the immediate goals and ultimate objectives of learning activities; (2) to motivate learners as they pursue such goals and objectives; (3) to diagnose learning problems that may impede learning progress; (4) to suggest future learning activities; and (5) to provide a permanent record of achievement, which is required in most educational institutions and is sometimes used by prospective employers to judge the degree of competency achieved by job candidates.

Learning objectives, then, become an inextricable part of the evaluation process. The basic learning objectives for both personal-use and vocational students are the same in the beginning phase of typewriting instruction—whether typewriting instruction is offered on an open-entrance, open-exit plan or on a conventional semester, quarter, or trimester plan; whether the instructional pattern is based on an independent learning system or on a conventional group plan; and whether the objectives of the typewriting program are expressed in behavioral or more traditional terms.

Only when taxpayers, parents, administrators, instructors, and students provide the conditions that will ensure the attainment of the objectives listed in the next paragraphs can the demands for accountability be fulfilled. First, a list of objectives is presented for students who wish to obtain typewriting knowledge and skills for personal-use applications (including vocational students). Then, a supplementary list of objectives is presented for students who wish to develop vocational typewriting knowledge and skills. In both lists, the objectives represent the *minimum* for students to receive an average grade (usually C) in typewriting. Students who do not meet these objectives should be retained in typewriting instruction until they are able to do so (with the exception of handicapped students who in the instructor's judgment are not likely to benefit from further learning activities in typewriting).

Copy difficulty and minimum performance times have not been included in the objectives that follow for two reasons: (1) Production problems in which syllabic intensity, stroke intensity, and word frequency have been established are not generally available to typewriting instructors. (2) Because of many other variables in the complexity of the production problems that are used in the evaluation process, suggested performance times would have to be arbitrary "guesstimates" and would have little validity. (An instructor who records and analyzes performance times of a substantial number of students for *specific* production problems can, however, establish reasonable performance norms for *those* problems.)

*Minimum objectives for beginning typewriting instruction.* By the end of beginning typewriting instruction, students—

1. Should have established these basic techniques as they work at the typewriter:
   a. Paper inserted and removed efficiently
   b. Eyes kept on copy during the actual stroking process

c. Ballistic stroking used on manual typewriter and light tapping stroking used on electric machine
d. Flowing rhythm maintained during actual stroking process
e. Carriage returned quickly without looking away from copy and with immediate resumption of stroking
f. Wrists held above the typewriter frame
g. Fingers and thumbs slightly curved
h. Body centered in front of machine
i. Spine kept erect, with body leaning slightly forward from the waist
j. Chair adjusted and feet kept flat on floor in such a manner as to relieve pressure between the front edge of the chair and the under portion of the thigh
k. Typewriter pedestal adjusted so that forearms are parallel with the keyboard
l. Pivot motion used by little fingers to reach the shift, tab, margin release, back space, and index keys while other fingers hover over the home-row position
m. Efficient procedure used to set margins and tab stops
n. Copy elevated at the right of the typewriter
o. Efficient layout used for supplies, tools, and finished work
p. Relaxed, but purposeful, attitude maintained when engaged in typewriting activities.

2. Should be able to type conventional unpracticed straight-copy material of 1.54 syllabic intensity and 6.0 stroke intensity at 35 gross words per minute for a period of three minutes with no more than 5 errors, using the touch method.

3. Should be able to type numerals and special symbols by touch as they occur in contextual material.

4. Should be able to operate machine parts routinely, including:

a. Margin-setting mechanisms
b. Alignment scales
c. Tabulator mechanisms
d. Ratchet release lever
e. Paper release lever
f. Lateral paper guide
g. Margin release key
h. Variable line space lever
i. Impression indicator lever
j. Touch control mechanism
k. Ribbon mechanisms
l. Back space key
m. Index key.

5. Should be able to divide words at preferred syllable points, using a dictionary or word book for reference purposes.

6. Should be able to make inconspicuous corrections, using a typewriting eraser.

7. Should be able to "squeeze and spread" letters in order to make satisfactory corrections.

8. Should be able to compose a rough draft of a personal letter, a personal business letter, and a business letter at the typewriter, using both block and modified-block letter styles and open and mixed punctuation styles; edit the draft, using reference books; insert proper proofreader's symbols to indicate corrections; determine any special lines needed; determine suitable margins and vertical placement; type the letter in correct format with one carbon copy; proofread the copy; and correct any errors.

9. Should be able to type an appropriate envelope for a personal letter, a personal business letter, and a business letter in correct form; proofread the copy; and correct any errors.

10. Should be able to fold typed letters properly for correct insertion into small and large envelopes.

11. Should be able to type a one-page outline with two ranks of subdivisions in acceptable form.

12. Should be able to type in good form a two-page, unbound manuscript from rough draft copy that includes a long and a short quotation, an ellipsis, a footnote for a periodical, a footnote for a book, and footnotes that require the use of *ibid.*, *op. cit.*, and *loc. cit.*, using any necessary reference sources.

13. Should be able to type in good form a title page, table of contents, and bibliography, using any necessary reference sources.

14. Should be able to type in acceptable form a three-column tabulation with a major heading, a secondary heading, and columnar headings from rough draft copy, determining correct placement of columns by using the back-space method.

15. Should be able to center typewritten material both vertically and horizontally on any size of paper.

16. Should be able to align typewritten material on fill-in forms.

17. Should have mastered the following typewriting knowledge:

a. Number of single-spaced lines per inch on a standard typewriter
b. Number of horizontal spaces to an inch on pica and elite typewriters
c. Size of standard typewriting paper
d. Correct sequential arrangement for adjacent punctuation marks and correct spacing before and after punctuation marks
e. Names and positions of regular letter parts
f. Names and positions of special lines in letters
g. Method for using *Zip Code Directory*.

18. Should demonstrate these work habits:

a. Attend class regularly
b. Come to class on time
c. Notify instructor in advance, if possible, when an absence or tardiness is unavoidable
d. Avoid distracting fellow students
e. Perform get-ready and put-away routines efficiently
f. Have necessary tools, supplies, and reference materials at work station and arrange them for efficient use
g. Listen to, record, and apply oral instructions

h. Read and apply written instructions
i. Observe principles of motion economy while handling materials.

*Minimum objectives for vocational typewriting instruction.* In addition to achieving the objectives listed in the preceding section for beginning typewriting instruction, vocational typewriting students should be able to achieve the *minimum* objectives that follow. In addition, these students should know how to use the appropriate reference materials and be encouraged to do so. Any unacceptable work in the following categories should be corrected or retyped if necessary.

By the end of their vocational typewriting instruction, students—

1. Should be able to type conventional unpracticed straight-copy material (1.54 syllabic intensity and 6.0 stroke intensity) at 50 gross words per minute for a period of five minutes with no more than 5 errors, using the touch method.

2. Should be able to type in acceptable form a two-page business letter with one carbon copy in any of three designated letter styles (block, modified-block, or AMS Simplified) with either mixed or open punctuation from rough draft copy. Students should determine margins and vertical placement, supply all regular letter parts and any required special lines, proofread the final copy, correct any errors, and type an appropriate envelope in good form.

3. Should be able to type in acceptable form a one-page memorandum with one carbon copy from rough draft copy. Students should determine margins and vertical placement, supply all necessary lines, proofread the final copy, and correct any errors.

4. Should be able to address in acceptable form 12 envelopes with printed return addresses, using an address list. Students should supply any necessary special lines indicated on the mailing list, supply appropriate courtesy titles for letters addressed to individuals, proofread the addresses, and make any necessary corrections.

5. Should be able to type a five-item statement of account in acceptable form with one carbon copy from unarranged copy. Students should determine, set, and use a minimum number of tab stops to effect motion economy; verify extensions, proofread the final copy; and correct any errors.

6. Should be able to type in acceptable form a five-item invoice with one carbon copy from unarranged copy. Students should determine, set, and use a minimum number of tab stops to effect motion economy; verify extensions, proofread the final copy; and correct any errors.

7. Should be able to type a five-item purchase order in acceptable form with one carbon copy from unarranged copy. Students should determine, set, and use a minimum number of tab stops to effect motion economy; verify extensions; proofread the final copy; and correct any errors.

8. Should be able to type in acceptable form a four-page, left-bound analytical report from rough draft copy, making one carbon copy. Students should determine vertical and horizontal placement; pagination; style of presenting quoted material; placement and style of footnotes at the bottom

of pages on which quotations occur; and the style and placement of information on the title page, table of contents, and bibliography. The copy should require footnotes for quotations from a book and a periodical as well as *ibid.*, *op. cit.*, and *loc. cit.*

9. Should be able to type in acceptable form on a spirit master a memorandum from arranged copy. Students should determine horizontal and vertical placement, type the copy, proofread the copy, and make any corrections.

10. Should be able to type in acceptable form on a stencil the body of a form letter from arranged copy. Students should determine the vertical and horizontal placement, type the copy, proofread the copy, and make necessary corrections.

11. Should be able to type in acceptable form a two-page speech with one carbon copy from rough draft copy containing several errors in spelling, grammar, word division, punctuation, and typewriting. Students should edit the copy, indicate required corrections with appropriate proofreader's symbols, determine vertical and horizontal placement, type the copy, proofread the copy, and correct any errors.

## A PLAN FOR DETERMINING PERIODIC GRADES IN THE SECONDARY SCHOOL TYPEWRITING PROGRAM

The model in Figure I presents an outline for determining grades throughout a two-year typewriting program at the secondary school level. An examination of this model will reveal that four elements are used to determine grades throughout the first and second year of instruction. These elements are techniques, timed writings on straight-copy material, production writings, and work habits. Each of these elements will be treated more fully in the sections that follow.

*Techniques.* Because good basic techniques are primary to the development of rapid and accurate typewriting, the model in Figure I shows that heavy emphasis is placed upon this element during the initial phase of instruction. At the end of the first grading period, the mastery of techniques comprises 65 percent of the total grade. Those techniques listed in one of the objectives presented earlier in the chapter should be stressed continually throughout this period.

Students should be made aware of the reasons for establishing good techniques, should realize that a large portion of their initial grade will be based upon technique performance, and should receive continual feedback about such performance. Instructors can provide feedback by observing students at work, then recording ratings on individual technique rating sheets. Occasionally, they may, during a single class period, rate each student in the class on the performance of one specific technique and record appropriate grades. When this procedure is used, students are not aware of which technique they are being rated on until it is announced at the end of the class period. Letter grades from these sources are then averaged together at the end of the grading period.

FIGURE 1. Model for Determining Periodic Grades in Typewriting at the Secondary School Level

| Elements To Be Graded During First Nine Weeks | Weight Assigned to Element | |
|---|---|---|
| | First Year | Second Year |
| Techniques | 65% | 10% |
| Timed Writings on Straight Copy | 25 | 30 |
| Production Writings | — | 50 |
| Work Habits | 10 | 10 |
| *Elements To Be Graded During Second Nine Weeks* | | |
| Techniques | 25 | — |
| Timed Writings on Straight Copy | 45 | 25 |
| Production Writings | 25 | 70 |
| Work Habits | 5 | 5 |
| *Elements To Be Graded During Third Nine Weeks* | | |
| Techniques | 10 | — |
| Timed Writings on Straight Copy | 40 | 20 |
| Production Writings | 45 | 75 |
| Work Habits | 5 | 5 |
| *Elements To Be Graded During Fourth Nine Weeks* | | |
| Techniques | 10 | — |
| Timed Writings on Straight Copy | 30 | 5 |
| Production Writings | 55 | 90 |
| Work Habits | 5 | 5 |

As good techniques become habitual, less emphasis needs to be placed upon them in the evaluation plan. Thus, the weighting for this element is reduced each grading period until it is no longer considered a part of the grade during the last three grading periods of the second year.

*Timed writings on straight copy.* Timed writings on straight copy are used to measure basic typing skill. As such skill is being developed in the early stage of instruction, they can be helpful indicators of learning progress. The instructor may wish to introduce such timed writings for grading purposes toward the end of the first grading period. While timings of shorter durations may be used for skill-building purposes, three-minute timings are suggested at this point for evaluation purposes. These evaluation writings should be on straight copy of average difficulty (1.54 syllabic intensity and 6.0 stroke intensity). An average of the best three speeds on timings with five or fewer errors may be used to determine the timed-writing portion of the total grade for the period. These average scores may be converted to letter grades on the basis of suggestions in instructor's manuals and from an instructor's records of student achievement on similar timed writings in preceding years.

Typewriting instructors and students must realize that the timed writing on straight-copy material is only a means of determining basic typewriting skill. Such copy is not representative of the usual kinds of typing jobs a typist performs either on a personal-use basis or in a vocational setting; therefore, once sufficient basic typewriting skill has been developed to do

problem typing, the weighting assigned to timed writings in the evaluation process during ensuing grading periods lessens markedly.

*Production writings.* As simple typing problems are introduced during the second nine-week grading period, production writings may be introduced. Such writings measure the quality and speed with which students can produce problem work during a specified period of time—a much more valid measure of typewriting ability than straight-copy timed writings.

An individual's performance scores on production writings prepared and administered by different instructors may vary greatly even though the nature of the problems to be typed is similar. The difficulty of the vocabulary, the complexity of the problem, the reference sources available for use, the type of correction aids used, the readability of the draft copy, the number of carbon copies required, and the length of the production writing are but a few of the variables that influence production writing scores. Even if there were a practicable way in which to ensure production problems of comparable difficulty for evaluation purposes, instructors would not likely agree on such variables as the amount of time allowed for the production writing, the severity of various types of errors, or the standards used to determine the production writing grade. Consequently, the procedures used for the evaluation of production writings are far from uniform.

Some instructors prefer to have their students determine production words per minute. This procedure is based on somewhat arbitrary criteria and can be rather complicated and time-consuming. Other instructors prefer a simpler method of determining production-writing scores. They have their students do as much problem work as they can within a given period of time. Instructors then give two grades—one for the amount of work completed during the production period and one for the quality of the work produced. The two grades are then assigned weightings and averaged together to determine a final composite score.

The author prefers to use a simpler method to determine production-writing scores for all grading periods except the final one. On the basis of past performance records of students in previous classes, he selects problems of the length and complexity that the better students in the class will be just about able to complete in a 30-minute period (excluding the occasional super-stars who can outperform their peers to an unusual degree). All students are then given 30 minutes in which to complete in acceptable form the two or three problems on the production writing. During this time, they must also proofread their work and make necessary corrections as they complete each problem. Those students who are typing a problem when time is called are told to proofread the portion of the problem that they are working on and make necessary erasures. If the erasures are well made, students are not penalized for these "half-corrected" errors on the problem on which they were typing when time was called.

Students are given an arbitrary number of points for the completion of each problem. The author gives a number of points that is divisible by four for easy calculating. For example, if a problem is worth 12 points, students who completed three-fourths of the problem would receive 9 points; one-

half, 6 points; and one-fourth, 3 points. No finer gradations are used. The points earned for the problems completed are totaled and converted to a letter grade for the speed portion of the production-writing grade.

Errors on the production writing are classified as correctable (requiring simple erasures and/or insertions or deletions) and uncorrectable (requiring that the problem be retyped). Correctable errors carry a one-point penalty and uncorrectable errors a two-point penalty. When the penalty points are totaled, they are converted to a letter grade. As the instructor decides what letter grades to assign to scores in the total array, he/she takes into consideration the performance of all the students in the class, the performance of students on these problems in previous years, and what in his/her judgment might represent the expectations of a typical employer. The instructor may weigh the final speed and quality grades as judgment dictates during any one phase of the instructional program (speed—½, quality—½; speed—⅓, quality—⅔, etc.).

Production writings during the final grading period become longer in duration, some extending over two or three class periods. Such writings include the jobs listed in the minimum objectives for vocational students at an earlier point in this chapter. During this phase of instruction, students must complete all problems on the production writing. As they complete each problem, they record on it the time it took to complete. The problems are checked by the instructor. Unacceptable problems are returned to students for correction. In some cases, this may necessitate retyping the entire problem. The correction time is added to the production time for the problem. The final production grade is based upon the total time required to produce acceptable work.

*Work habits.* Good work habits can be developed in typewriting laboratories. Rules and procedures similar to those one might expect in the business environment should be established for the typewriting course. In a class discussion early in the course, students should be made aware of these rules and procedures. Students should also understand the reasons that such rules and procedures have been established. When they are justifiable, students are more willing to observe them. From that time on, the instructor may informally observe students on a daily basis to ensure that good work habits are being established.

An instructor might use this procedure to "grade" work habits on the secondary school level. Each student is given 25 bonus points at the beginning of each grading period. For each infraction of a rule or a procedure (e.g., not bringing necessary books or supplies to class, borrowing an eraser from a neighbor, erasing without moving the carriage), five points are deducted from the student's total. Each time the instructor enters such a deduction in his grade book, he/she makes certain to tell the student that such an entry has been made and discusses with the student once again the reason behind the rule or procedure that has been violated. At the end of the grading period, the instructor totals the remaining bonus points for each student and assigns letter grades to the array of scores. After the first one or two grading periods, few deductions have to be made if the instructor has

implemented this procedure on a daily basis. As good work habits become established, less weighting can be assigned to this element during ensuing grading periods.

## CONCLUSION

Administrators, supervisors, and typewriting instructors should be held accountable for effective and efficient learning in the typewriting laboratory, assuming that they are able to have adequate facilities and a sufficient number of trained instructors. Evaluation of student performance in typewriting should be based on clearly stated objectives that ensure students will attain sufficient knowledge and skill to use typewriting effectively as a writing tool in both their personal lives and in their occupations.

CHAPTER 19

# Evaluating Instructional Objectives in Recordkeeping/Bookkeeping/Accounting

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"Competency-based education has attracted more attention, more advocates, and more antagonists than any other recent movement in education. Within its short history, . . . states have proposed CBE as an alternative means to certify teachers, . . . universities operate CBE programs, federal projects mandate it, AAUP damns it, researchers decry its lack of supporting evidence, and proponents employ it as a way to collect such evidence."[1]

The 1960's may be characterized as the decade when the dominant public outcry was for relevancy in education. This was especially true near the end of the decade when social unrest was often directed toward educational institutions and the educational process itself. The loudest outcries came from social reformers, political activists, and frequently from students who were somehow dissatisfied with the educational services being delivered. Many school systems and institutions of higher education heeded the cries and developed new programs or modified existing programs in an effort to provide the relevance that was demanded.

But schools have been attacked for centuries, so any new or reinstituted challenge is often greeted with a "ho-hum" attitude. Teachers have often shrugged off criticisms with a flippant comment, inferring that the public does not know anything about the professional aspects of education. Or, perhaps teachers have defensively stated that their efforts could not be adequately measured by the public nonprofessional.

The decade of the 1970's has heard a different but in many ways more dominant outcry—the call for accountability in education. This time the outcry comes from the taxpayer and the elected and appointed officials who represent the taxpayer. The effects of economic upset and spiralling inflation have caused the taxpayer to demand information about the outcomes of expenditures for educational facilities and programs. The average taxpayer seems to have lost confidence in education and often has refused to support local schools by voting against tax levies and bond issues that were needed to continue program development and the upgrading of physical facilities.

The new cry from the public (and sometimes governmental) sector, then, cannot be taken lightly. Educators can hear that cry, and what they hear is the desire of the public to know how the student product measures

[1]Houston, W. Robert, and Jones, Howard L. *Three Views of Competency-Based Teacher Education: II University of Houston.* Bloomington, Ind.: Phi Delta Kappa Educational Foundation, 1974. p. 7.

up. In essence, the public is saying, "We are paying good tax dollars for educational programs that do not appear to produce the desired outcomes. It is now time to get what we are paying for." Today's catch words, as they apply here, are competency-based business education and/or accountability. To be more specific: for this chapter, the objective is to present methods by which instructional models can be established for the attainment of instructional objectives in (high school) recordkeeping/bookkeeping/accounting courses.

## THE BOOKKEEPING FUNCTION—WHAT IS NEEDED

Not all of the recordkeeping/bookkeeping/accounting courses have the same names, and publishers also have separate textbooks with titles such as Recordkeeping, Bookkeeping, Accounting, Bookkeeping and Accounting, and Accounting for Secretaries. For the purpose of this chapter, however, the separate courses and titles will be lumped together under the heading of recordkeeping/bookkeeping/accounting and, for the sake of brevity, will be referred to as RBA.

Not all authorities in business education are in total accord about the overall purpose of the high school RBA course (or courses). There is, however, some general agreement: principally, that the objective of such a course is to prepare graduates for productive jobs in our country's free enterprise system.

For example, most would agree that the beginning course should provide a basic background of principles and procedures to enable the student to assume an entry-level position. Not all, however, agree on the type of entry-level positions that are available or the requirements of these positions. And not all agree on the value of high school RBA for those who plan to enter college and enroll in college-level business programs. What follows, therefore, is material describing a system that provides for accountability in an RBA course that recognizes individual differences.

## ESTABLISHING THE CURRICULUM

Too often, perhaps, the business teacher follows exactly the materials presented in the manual that accompanies the textbook. Little time may be spent in adapting the materials to the local situation, so the next few paragraphs present some first-step suggestions for making improvements. But first, a comparison of the conventional style of teaching to the accountability/competency-based method would be in order. A comparison would look like the chart on the next page.[2]

*The employment survey.* Before establishing the curriculum, the business teacher must first determine the needs of the RBA course. Some of the needs are concerned with the community, school, counseling, and required skills, so consideration must be given to these in a manner similar to the following:

COMMUNITY. A community survey is an absolute necessity, and it

[2]Burdin, Joel. *Three Views of Competency-Based Teacher Education: I Theory.* Bloomington, Ind.: Phi Delta Kappa Educational Foundation, 1974. p. 15. (As adapted from his Figure 2.)

Curriculum for
Recordkeeping/Bookkeeping/Accounting in the Secondary Schools

| Topic | Conventional System | Accountability/ Competency-Based System |
|---|---|---|
| Objectives | Nonbehavioral;<br>Generalized | Behavioral;<br>Specific, Detailed;<br>Individualized |
| Course Outline | Chapter and Unit;<br>Lockstep | Step-by-Step Objectives;<br>Individual Progress |
| Course Conduct | Lecture; Demonstration;<br>Printed, Objective-type Tests | Lecture, Demonstration;<br>Individualized Tests and Evaluations;<br>Individual Progress;<br>Seminar Groups |
| Student Evaluation | On 6-, 9-, or 12-week Basis | Daily, Weekly, by Unit, etc. Some Standardized; Others, Individualized. |
| Emphasis | Teacher;<br>Text, Workbook, Practice Set;<br>Tests | Individual<br>Student Progress;<br>Personal Evaluation;<br>Achievement/Performance;<br>Job Entry Skills |

should be repeated at frequent intervals—at least every five years. For example—

One small rural community school may not be able to place its RBA graduates locally, and most of the students are not willing to relocate. The course here could conceivably be directed toward the general education level with personal business applications.

A large manufacturing community has many entry-level positions, but of a varying degree of specialization that include skills from the lowest levels of recordkeeping through full-charge bookkeeping and into accounting functions. This would be a highly vocational curriculum.

A third community has a specialized need for bookkeepers on an entry-level basis, but who are also trained in the use of electronic data processing equipment. New and up-to-date methods are needed here, as well as some specialized equipment.

Still another school has a program that is vocationally oriented toward office education with a secretarial emphasis. The RBA needs of stenographers and secretaries would obviously be in order.

But none of these, nor other community needs, can be fully appreciated without the employment-area community survey.

SCHOOL. The days have long since passed when communities were dotted with specialized schools: science high schools, commercial high schools, high schools for the gifted, and so forth. But neighborhood schools still have personalities, and some actually tend to specialize. On the other hand, some schools have become "vocational" only because there are federal dollars available for vocational office education.

To be intellectually honest, then, the school so designated must make a real effort to provide vocational RBA courses. The courses, teachers, equipment, and all aspects of the curriculum must be directed toward the employability of those who enroll in the RBA courses. The school must serve the community needs in all respects.

If the high school is one that traditionally prepares students for postsecondary education (including community colleges, private business schools, junior colleges, colleges, and universities), the RBA course should also be designed to fit those needs. Obviously, entry-level positions for high school graduates are somewhat different from those for the graduates of postsecondary institutions.

COUNSELING. Any curriculum construction should consider the individual as its central point. A pertinent question might be, Is any counseling done prior to the enrollment in the course, or are all students accepted without question? Interest and aptitude tests can be a great help when used intelligently by a qualified counselor. Mathematics and number-recognition skills are important for anyone in an RBA job; quantitative and logic skills are important for those who want to combine electronic data processing with RBA background; and skills in written communication are essential for the students who dream of a career in management (e.g., controllership) or public accounting. Personality tests can be helpful, too.

SKILLS, COMPETENCIES. Some points about this topic have already been mentioned or referred to in previous material. The community (employment) survey must not only include the number of positions open and the rate of pay provided, but specific job skills must also be determined. Small towns and small offices (anywhere) may require one to be a full-charge bookkeeper. In other positions, the firm may want the bookkeeper to be a specialist in accounts receivable, payroll, inventory, billing, and so forth.

The curriculum should obviously be patterned after such needs as are mentioned above. But also to be considered is the ability of the individual to use (with employable skill and as the need arises) adding and calculating machines, unit record equipment, electronic data processing equipment, typewriters, or other common pieces of office equipment. In some jobs, one's handwriting skills are still important; in others, one may be required to work efficiently and pleasantly with the public. Arithmetic skills can never be overlooked. And the list can go on and on.

The general topic of curriculum needs should not be confined to the subjects mentioned above, of course. The reader can and should consider his or her school, the community, and the students in order to make proper

application. It is just well to remember that no one textbook necessarily fits the needs of every school system.

## GOALS AND OBJECTIVES

Not everyone agrees on the goals and objectives of the RBA course in high school. Many writers argue that the overall goal should be vocational, others stress the general education or personal-use point of view, and a few contend that the course should fit all of the molds.

*Goals.* Because of the nature of this chapter assignment, the approach will be vocational. The purpose of the high school RBA course, then, is to prepare individuals for entry-level positions in business where the beginning job will involve some duties related to recordkeeping / bookkeeping / accounting. Should the individual enter college, the course might also enable the person to secure a part-time job to help pay college expenses, earn a better grade in the basic college accounting course, or provide for a better understanding of other college courses in business and economics. However considered, the high school course would then be either vocational or vocationally related.

*Objectives.* The preceding paragraph clearly leads into a discussion of objectives. Objectives of students vary, and there are some teachers who believe that the course should also provide for individual differences.

There are some students who need material that gives them an understanding of the bookkeeping cycle and a skill in performing all of the various functions involved. Others will be preparing for secretarial careers, and these students will need to learn the skills normally used by the secretary. The same type of reasoning can apply to certain other individuals, such as the low-ability persons who will never be able to perform in a position other than that of keeping records at a relatively simple level, the college-bound, or the vocational agriculture student who will need the bookkeeping/accounting skills for farm and tax records.

The need, then, for a thorough understanding of the course goals and objectives should be apparent. Any textbook which is used just as it comes from the publisher may not fit all purposes. The classroom teacher must take a major step in planning the goals and objectives of the bookkeeping/accounting course so it will fit the needs as illustrated in the first topic in this section.

*Curriculum.* As stated above, the classroom teacher has a responsibility to plan the curriculum so that it will provide for the needs of the students and of the community. Two separate factors will be mentioned here.

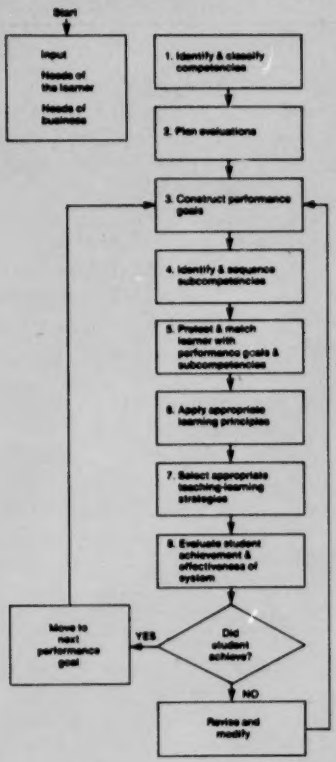
First, the curriculum can be based on the textbook and its supporting materials—manual, study guides, printed tests, practice sets, and so forth. Should this be the case, the teacher may still be required to make certain adaptations so that adequate instruction and measurement can be obtained.

In using the preceding materials, one must be aware that individual differences are difficult to provide for and that the end goal may be almost identical for each member of the class. Such classroom planning, instruc-

tion, and grading, however, can provide the prospective employer with some sort of uniformity in hiring.

Second, the curriculum can be based on modules of RBA skills and functions that can be individually packaged for the student. Each module is graded, and the overall average or total score determines the student's course grade. The different modules may be individually chosen by the student, but a better method would be for the modules to be selected because of the counseling program previously mentioned. Such a program would consider the individual differences that exist among students and allow each student to perform the work he or she is qualified for or which best fits his or her needs. Competency, too, can be more accurately determined, for the measurement will be based on specific topics.

The following flowchart, which is taken from a current text, is an illustration of the module approach to the learning of RBA skills and concepts.[3] The flowchart can be modified to fit any number of situations: from the differing abilities of individual students to actual office situations,




[3]Popham, Estelle L.; Schrag, Adele Frisbie; and Blockhus, Wanda. *A Teaching-Learning System for Business Education.* New York: Gregg Division, McGraw-Hill Book Co., 1975. p. 150.

to skill levels, or to whatever situation may be required in a specific school or community. It can be used to determine levels of competency—that is, levels of educational accountability—which is the basis for this chapter. It can be used to fit almost any learning situation in the RBA sequence, and the term accountability will be stressed to emphasize this point.

## ACCOUNTABILITY EXPLAINED

Just what is accountability and how does it affect a specific program such as business education? As is true with most educational concepts (especially those still evolving), several definitions have been offered regarding the term. While a consensus on a definition may never be reached, educational accountability basically means that " . . . the schools and the educators who operate them be 'held to account' (i.e., held both responsible and answerable) for what they produce as 'educational outcomes' (i.e., what students learn)."[4]

The educational veteran will immediately recognize that this basic idea of accountability is not really new. Gronlund emphasizes this point:

> Although teachers, administrators, and school board members have always assumed responsibility for student learning, an accountability program requires some sort of report to the public and possibly some governmental agency (e.g., state department of education) concerning the success of the program. This typically involves providing tangible evidence concerning the extent to which the objectives of the school program are being achieved by the students.[5]

His statement carries the implication that any educational program that seeks to comply with the call for accountability must do at least these four things.

1. Develop a set of instructional objectives that are stated in terms of educational outcomes.
2. Offer an instructional program that is designed to help students attain the stated objectives.
3. Develop a plan of evaluation that allows for the determination of the extent to which students have attained the objectives.
4. Develop an information dissemination plan for reporting program results to the appropriate parties.

Furthermore, the results of an evaluation scheme provide feedback to those responsible for the program. This feedback serves as the basis for modifying a program that is not currently producing satisfactory results: it may involve the restatement of objectives, the redesign of instructional programs, or the alteration of evaluation procedures. All modifications are undertaken in an effort to develop a program that maximizes student learning outcomes, given the resources available to carry out the program.

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[4]Browder, Lesley H., Jr.; Atkins, William A., Jr.; and Kaya, Esin. *Developing an Educationally Accountable Program.* Berkeley, Calif.: McCutchan Publishing Corporation, 1973. p. 6.

[5]Gronlund, Norman E. *Determining Accountability for Classroom Instruction.* New York: Macmillan Publishing Co., 1974. p. 1.

Clearly, the accountability concept has similar implications for a high school RBA program. What is needed is an accountability model that encompasses the requirement outlined above and can be adapted for use by any teacher—experienced or otherwise—regardless of whether the school is operating under an explicit accountability program or not. The following section presents just such a model to be used in developing a responsible and accountable bookkeeping program. While the emphasis in the model is on evaluation, the other elements of the program are no less important.

*The Systematic Evaluation/Accountability Model.* The Systematic Evaluation/Accountability Model (which will be referred to as SEAM in the following comments) is comprised of four subsystems or phases and follows the outline of Gronlund. Following that listing, the application of the model to an RBA program will be considered. The reader is cautioned to understand that all four subsystems should be used if a complete evaluation/accountability system is to be placed in operation. If the intent is to operate only a system to evaluate student learning in the classroom, then only the first two subsystems should be used.

SYSTEM EVALUATION/ACCOUNTABILITY MODEL

Planning Subsystems

- Assess needs
- Specify goals and objectives
- Establish curricular content
- Design course
- Design evaluation program (tests, logs of activities, etc.)

Operating Subsystem

- Assess beginning levels of knowledge, skills, and attitudes
- Provide learning/practice activities
- Describe classroom events
- Test periodically
- Assess final levels of knowledge, skills, and attitudes

Program Evaluation Subsystem

- Analyze evaluation evidence
- Draw conclusions
- Propose modifications

Information Dissemination Subsystem

- Prepare report of findings
- Disseminate report to appropriate audiences

PLANNING SUBSYSTEM. Effective planning is essential to any well-developed educational program. The SEAM planning subsystem begins with a needs assessment study. The attempt here is to identify the needs of students and of the employers in the employment community. The needs of students can be determined in large part by studying the requirements of the employ-

ers of graduates of the RBA program. In other words, if the planner can determine what skills, knowledges, concepts, and attitudes are needed for students to successfully obtain, hold, and advance in bookkeeping positions, the information becomes a major input to the planning of the RBA program.

The community survey (or needs assessment study) must obviously be well done and complete, allowing for wide coverage. It must also provide for sufficient time so that results can be checked, studied, and applied in a practical manner. One must remember at all times that the community study serves as the basis for the goals and learning objectives of the RBA course or courses.

OPERATING SUBSYSTEM. If learning modules are in fact used, there is the obvious need for the teacher and school system to know where to begin. Placement tests are one obvious method. However, one can be proficient in certain phases of mathematics, but have deficiencies when applying the mathematics to the RBA situation.

An example of the preceding point is the reasoning involved in the fundamental bookkeeping operation: A = L + P. Of particular importance is that the student understand that revenues, costs, and expenses are a temporary part of P in the equation. In fact, at the end, they actually become a permanent part of P.

It was John Locke who reportedly observed that "bookkeeping is more a matter of logic than of arithmetic," and the teacher must understand and accept that concept.

The learning and practice activities, then, must be based upon the needs of the beginning office jobs. Those activities, too, must be planned so that the employee can build upon initial knowledge and skills so that he/she can adapt to change, be promotable, use imagination and creativity on the job, be willing to return to school at necessary intervals to learn the new and reinforce the old, and—in general—keep up to date.

In all of the foregoing, periodic testing must be a part of the function so that competence in one skill or knowledge area is apparent before the student can continue into the next phase. If RBA courses lead to employment, then the student should show competence in each of the employment areas in which study is pursued.

Examples of the preceding competencies are included in the following list, which is obviously not an all-inclusive one.

The fundamental bookkeeping equation
The classification of accounts
The bookkeeping cycle
Payroll systems including taxes, accrued pay, fringes, etc.
Inventory methods
Special journals: purpose, application, need
Terminology
Handling and safeguards of cash
Use of allowances for depreciation and bad debts
The knowledge of the differences between the single proprietorship, partnership, and corporate types of business organization

The function of electronic data processing in RBA
Financial statements
Taxation.

The extent to which one shows competency in the listed (and other) skills, knowledges, and concepts depends upon the capacity of the student. Accountability obviously will be measured in terms of the capacity of the student and the extent of his/her participation in the program.

PROGRAM EVALUATION SUBSYSTEM. The preceding sections have referred to the testing, evaluation, and reporting of the ability of the student who has participated in the RBA course. The student may obviously (but not always) be restricted as to where he/she will practice those RBA skills, but the standards should be nevertheless standardized on a nationwide basis.

For example, an understanding of the "system" is somewhat universal. The United States does not have a monopoly on the knowledge of bookkeeping, nor was it originated here. Fra Lucca Paciolo is given credit for having written the first book on double-entry bookkeeping, but bookkeeping history was written long before the 1494 date of Paciolo's book—the Bible, tablets from the Babylonian and Egyptian eras, the trade of the Phoenicians, and even the tax collections of the Sheriff of Nottingham all bear evidence of the need for accurate records to determine profit or loss, the need of taxes to pay for government, and the rights of property owners.

Therefore, such action verbs as "determines," "distinguishes," "identifies," "analyzes," "prepares," "interprets," and many other terms assume increased importance as the student advances up the RBA ladder of skills and competencies. The student must be able to analyze, draw conclusions, explain, and perform other high-level cognitive tasks, but the teacher must also be able to evaluate the student and determine the level at which he/she can do those things.

There are, in other words, differences among recordkeeping, bookkeeping, and accounting. Teachers must recognize these differences and be able to certify students as to their various abilities. All of this is done through the program evaluation; and if it is done correctly, there will be national norms for such evaluations—norms based on specific modules that relate to specific job functions.

INFORMATION DISSEMINATION SUBSYSTEM. One might surmise that now that we have identified and taught, the reporting will be easy. Such, however, is not the case.

The various new laws, such as those governing "family privacy" and the "protection" of personal information makes reporting a little more difficult. Perhaps some of these new laws are good, for surely reports have been made on students when the reporting has been subjective rather than objective. Program accountability, if practiced honestly and if the program was created correctly, would allow for the dissemination of information on a correct basis.

Standardized examinations, based on learning modules national in scope, would allow teachers to certify that a student was proficient in cash procedures, payroll matters, special journals, or some other phase of the

RBA program. The reporting could be done on forms that would conform to federal or state laws and would allow the business sector to place some validity on the ability of our students to perform RBA functions. Such reporting would also keep the public informed of the quality of our programs, courses, teachers, objectives, and other important school factors.

## IN DEFENSE

The presentation so far has been one of proposing (the idea is not original) that the secondary school programs in recordkeeping/bookkeeping/accounting have some degree of standardization according to the entry-level jobs available. Research has given some justification to the theory that not everything that is being done is being done correctly.

*Trends.* For many years, the trend in almost all of education has been to upgrade programs and/or courses by name but not by actual content. In this area of RBA, there is one outstanding example: our major textbooks in the high school bookkeeping fields use the name "accounting" in their titles. This is a system of unwarranted upgrading that does not agree with the definitions given to occupations filled by high school graduates, nor does the term agree with some of the recent research in the field. (Moon[6] and West[7] are just two of the researchers who have presented us with such evidence.)

The primary function of secondary education, insofar as business courses are concerned, is to prepare students for entry-level positions in business, government, industry, and the like. This is the vocational objective and second only to that is the so-called related vocational objective where such skills and concepts are used to support another vocational field (bookkeeping for secretaries, bookkeeping for agricultural purposes, RBA concepts for the business person who needs to understand them in order to do his business in a more efficient manner, etc.). True accounting jobs are filled by those who normally have some sort of postsecondary education; but of a certainty, accounting jobs are not normally filled by the recent high school graduate who has only entry-level skills. The literature also contains considerable information from college and university professors who say that high school bookkeeping has been of little value to those who major in accounting at the college level.

*Recommendations.* Whether one calls the system accountability or competency-based education (and there appears to be a difference between the two terms), the concept appears to be valid. Educational psychologists have indicated for many decades that there is such a defensible concept as that of individual differences among students. If that is so, then why do teachers not practice the theory?

The method that is suggested, in bare outline form in a short chapter, is that the recordkeeping/bookkeeping/accounting vocational skills and

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[6]Moon, Opal Henry. *An Investigation of the Duties Performed, Systems Used, and Characteristics of Full-Charge Bookkeepers.* Doctor's thesis. Atlanta: Georgia State University, 1970.

[7]West, Leonard J. *Survey of Entry-Level Bookkeeping Activities in Relation to the High School Bookkeeping Curriculum.* Research Report 73-1; New York: The Institute for Research and Development in Occupational Information, 1973.



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concepts be taught in module form. Furthermore, these modules can be based on jobs actually performed in the "real world" and designed so as to prepare students for:

Obtaining entry-level jobs upon graduation from high school

Gaining promotions on the job as new skills, based on old skills, are learned

Continuing their education so that education can be a life-long concept for personal benefit and enjoyment.

Research is already available to help us improve our teaching, and certainly encouragement is also present so that we can continue to determine what business demands of our graduates for entry-level jobs. In addition, the general public is entitled to know the quality of our educational programs, and an accountability system is one method by which the public can be informed.

John W. Gardner, former Secretary of Health, Education, and Welfare, once wrote the following statement that surely applies here to secondary school bookkeeping instruction:

> An excellent plumber is infinitely more admirable than an incompetent philosopher. The society which scorns excellence in plumbing because plumbing is a humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water.[8]

The two writers of this chapter, both business educators, are willing to vote in print for good plumbing and good philosophy in the form of accountability and competency-based education—by whatever name we want to use. In the long-range planning of our work, we are responsible to both the student (to prepare the individual for a productive place in our economic system) and the public (to prepare productive workers who will staff the marketplace and preserve and promote our economic system). A better teaching job is possible, and the time for it is now.

[8]Gardner, John W. *Excellence*. New York: Harper & Row, Publishers, 1961. p. 86.

CHAPTER 20

# Evaluating Instructional Objectives in Basic Business and Economics

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Evaluation, in any discipline, has a two-fold purpose. One purpose is to determine how much student learning has taken place, i.e., the quality of student performance. A second, and just as important purpose, is that of determining the quality of teacher performance. Conclusions regarding these two purposes help in assessing how good the course, or the unit, is in leading to a meaningful experience—an experience that will prove helpful in future activities in which the students will be involved. Every evaluation of student performance should be analyzed in terms of the total experience, including teacher input.

Questions which such analysis of evaluation should answer are: (1) Did the activity in the course lead to the desired end performance? (2) To what extent did the course succeed or fail? (3) What were the perceived reasons for success or failure? (4) What and how might content, procedures, processes, or activities be changed so that a greater degree of success can be attained in a succeeding period? This chapter will concentrate primarily on how to obtain the answer to the first question; the answers to questions two, three, and four can be obtained only by having data on a very specific situation.

Evaluation is desirable and necessary both from the student as well as the teacher point of view. Perhaps there is no need to belabor this point; however, students want to know directly or indirectly how well they have done, whether they learned what they were expected to learn, and how they measure up against others. Learning loses some of its value to most individuals when they have no means of determining the degree of their success, and most individuals want to know if they did "average" or "better than average." Possibly one of the weaknesses of pass-fail systems is that the discrimination among students' achievement levels is not precise.

Similarly, instructors also need to know how well they have performed. Did their learning plan succeed? Was the sequence of activities effective? The hue and cry regarding accountability in the classroom might be due to the fact that too few instructors in the past had been professional enough to analyze evaluation results in terms of their own planning and performance. Nonetheless, very few would argue that evaluation of classroom effectiveness is unnecessary.

## PROCESS FOR EFFECTIVE EVALUATION

Whether course objectives or course content should be determined first is sort of like asking the question: Which came first, the chicken or the egg? What realistically happens is that teaching objectives are first developed, then the content, and finally, the specific instructional (or performance) objectives. Nevertheless, somewhere in the planning, an outline of course content must be developed. This may well be derived from the textbook being used or inversely after determining content to be covered and selecting a textbook or materials that adequately cover such content. State education associations often have suggested courses of study. For example, a California-based Basic Business Task Force suggests that the following areas be stressed in general business:[1]

- The Business System
  - You and the business economy
  - Characteristics of a free enterprise system
- Career Education—Planning Your Future
- Consumer Education
  - Consumer buying
  - Services for consumers
  - Problems of the consumer
  - Sources of consumer information
- Credit
  - Establishing credit
  - Cost of using credit
- Citizenship Responsibilities
- Insurance
- Money
  - Borrowing money
  - Planning a savings program
  - Planning the use of your income

In the area of economics, the Joint Council on Economic Education or state councils have materials that are helpful in determining content of secondary school economics courses. Such courses will include topics such as the following:

- Economic Scarcity
- Factors of Production
- Supply and Demand
- Money and Credit
- Business Cycles
- The Role of Government
- Comparative Economic Systems
- Saving Investment and Capital

Neither of the above lists is intended to be inclusive of all units that could be taught; however, for each unit a set of teaching objectives (general) and the corresponding learning objectives (instructional) must be developed.

[1] Blockhus, Wanda. "Fifteen Learning Modules in General Business." *California Business Education Journal*, May 1973. p. 3.

*The evaluation system.* A decision has to be made regarding the type of evaluation system to be used. Controversy exists regarding the desirability of the major types: norm-referenced (relative) and criterion-based. A norm-referenced system results in a ranking of students since each student's performance is measured against all other students' performances. With a large number of students, the result is the familiar "bell-shaped curve."

Much of current educational philosophy, planning, and implementation logically leads to a criterion-based system. A criterion-based system measures each student's performance against some previously established standard. This system has much to recommend it, although some problems still exist in its implementation and application to all situations. However, its primary advantage is that evaluation of achievement appears to be more precise and, therefore, more meaningful. Where it is difficult to measure "an understanding of the American economic system" it is easy to determine if the student can, in fact, "list the characteristics of the American economic system" or "identify the strengths and weaknesses of the system." This in itself adds much to the evaluation process. It does mean that for each unit of instruction the teacher must make the effort to develop clear, identifiable, measurable teaching and learning objectives. The instructor must also be as precise as possible in determining the overall purposes of the course or unit, which are translated into specific learning objectives for the student—performance objectives, if you will. This does not preclude having some teaching and learning objectives that are more "qualitative" than "quantitative." But, the more precise and measurable the objectives, the easier the task of evaluation and the more certain the instructor can be that the evaluation system measures what it is intended to measure.

A criterion-based system has very explicit definitions of the desired end result. These are set relative to what knowledges, skills, and activities are necessary or desirable for the next learning sequence. The standards of a criterion-based system can be set at any level up to 100 percent. In setting such standards, consideration must be taken of the nature and difficulty of the content being taught. Conditions under which behavior is to be evaluated, such as the amount of time to be allowed, must also be prescribed.

Differentiation is needed in testing and evaluating not only when performance of different individuals must be determined and compared but also when performance is measured against some standard, or when present performance is measured against past performance. Even a criterion-based evaluation must distinguish between those who have achieved and those who have not.

*Teaching objectives.* In developing objectives, instructors are faced first with defining the rationale for teaching the unit. They should know why they are teaching the course. As instructors, they should be convinced that the course is necessary or at least highly desirable for an effective economic, social, or political life in the future.

Some general teaching objectives of educational value regardless of the discipline can be stated, such as:

1. To generate student involvement in learning activity

2. To develop in students an inquiring mind
3. To develop in students the ability to solve problems as a result of their inquiry
4. To develop in students a concern for values and an awareness of the role values play in an economic and business system.

All of this involves planning and implementing learning activities that identify concepts and allow students to apply these concepts in different situations.

*Learning objectives.* A learning objective is distinguished from a teaching objective in that it describes what it is that the student must know or be able to do. Classification of learning objectives varies. Gagne lists eight types of learning: signal learning, stimulus response, chaining, verbal association, discrimination learning, concept learning, rule learning, and problem solving.[2]

Bloom lists only two major categories: knowledge and intellectual abilities or skills.[3] However, his second category is divided into comprehension, application, analysis, synthesis, and evaluation.

The difficulty with these various classifications is that they seldom include anything about attitudes or values, possibly on the assumption that attitudes cannot be changed and that values should not be taught. A classification that does not ignore these controversial objectives includes: knowledge, inquiry and application skills, value awareness, and attitude development. The degree to which these four objectives—knowledge, inquiry, values, and attitudes—are emphasized will depend in part on how advanced the course is. For example, acquisition of knowledge may be the primary objective in the first unit of a course, since use of inquiry and application skills depends on a depth and breadth of knowledge before adequate analysis can take place. In this chapter, the areas of economics and insurance will be used to illustrate the kinds of objectives that can be written.

*Acquisition of knowledge.* These objectives are the easiest to write. They involve recall of specific facts, methods, processes, or generalizations. The following illustrate such objectives in the area of economics:

1. The student shall be able to identify the characteristics of the following economic systems: capitalism, socialism, communism.
2. The student shall be able to discuss the advantages and disadvantages of the following economic systems: capitalism, socialism, communism.
3. The student shall be able to name and explain the fundamental economic problem faced by any society.
4. The student shall be able to name the factors of production and to explain their importance in producing goods and services.
5. The student shall be able to define GNP, explain what is included, how it is measured, how price changes affect it.

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[2]Gagne, Robert M., (Conditions of Learning, 1970) as discussed by DeCecco, John P., and Crawford, William R. *The Psychology of Learning and Instruction.* Englewood Cliffs, N.J.: Prentice-Hall, 1974. pp. 37-40.

[3]*Ibid.*, pp. 40-41.

Knowledge objectives in an insurance unit might include:

1. The student shall be able to define common insurance terms.
2. The student shall be able to explain how to determine insurable interest.
3. The student shall be able to identify the type of auto insurance coverage that is most important for motorists to have and explain why.
4. The student shall be able to identify the kinds of causes resulting in damage for which property can be insured.
5. The student shall be able to distinguish between annuity and insurance.

*Acquisition of inquiry and application skills.* Attainment of both inquiry and application skills shows ability to use abstractions (ideas, principles, theories, and procedures) in particular or in concrete situations. The students should demonstrate the ability to analyze and synthesize, classify materials, assemble parts, and rearrange these parts into new patterns or solutions. They should be able to make judgments about the value of the material or methods being used and to apply standards of acceptability.

Acquisition of inquiry and application skills reveals the ability to use facts in various situations, to ask relevant questions based on data presented, or to solve a problem. Students should be able to use facts to perceive relationships, to identify and explore a concept, and to make decisions about issues, which is the application of concepts. They should also be able to develop analytical tools and concepts that would lead to inquiry about the data in the discipline being studied. In the area of economics such objectives might include the following:

1. The student shall be able to demonstrate the following application of analytical tools:
   a. Interpret given economic barometers and the consequences or implications of this to our current economic situation.
   b. Identify the sources of reliable economic data and, given access to these, determine a course of action in a given situation.
   c. Given charts, graphs, or other conceptual models, be able to use these in describing an economic situation or issue.
2. The student shall be able to explain the relationship between demand and income in an economic system.
3. The student shall be able to explain how the current economic conditions and economic policies being pursued are affecting prices, profits, and distribution of income.
4. The student shall be able to identify and discuss at least five conflicts in setting national goals for our society.

In the area of insurance the following might reveal the acquisition of inquiry and application skills:

1. Given an automobile insurance rate book and a case involving a family, the student shall be able to prescribe the type of auto coverage the family should have, the amounts of coverage recommended, and the current rate of premium for such coverage.

2. Given an application for insurance, and a family case, the student shall be able to complete the form accurately.
3. Given a family case, the student shall be able to recommend the kind and amounts of insurance that the family should carry.
4. Given a history of a claim and the insurance coverage, the student shall be able to determine whether the claim should be allowed or not and to explain the reasons for his/her decision.
5. The student shall be able to read an insurance policy and summarize the major points of coverage, limitations, and cost of such a policy.

*Awareness of values.* "There is no place to hide from your values. Everything you do reflects them. Even denying that your values show in your every act is a value indicator."[4] This quotation from Simon and deSherbinin indicates the importance of value awareness.

Simon and deSherbinin advocate inclusion of value clarification in an educational program. This involves knowing what one prizes, choosing those things one cares for the most, and weaving these into everyday living. It can be taught through either real-life situations or make-believe stories, but it should deal with issues of concern to people. The example used by Simon and deSherbinin is the sale of a used car and the extent to which a person is then truthful about its condition contrasted with the possibility of not selling it or selling it at less than he might have gotten otherwise. The reaction to the situation reveals much about individual value systems and the role these systems play in everyday decision making.

Inclusion of value objectives involves some controversy. The degree to which value objectives are emphasized as part of the learning experience depends on the instructor's attitudes and value judgment regarding the appropriateness of such objectives. A growing segment of educators, however, feel that "moral education," as it is sometimes termed, has been neglected if not abdicated by the educational system. These educators build a strong case for inclusion of values and use as support a statement of Dewey: "The aim of education is growth or development, both intellectual and moral. Ethical and psychological principles can aid the school in the greatest of all constructions—the building of a fine and powerful character."[5] What a fine and powerful character is, of course, is a value judgment. However, if inclusion of value objectives are intended for clarification and not indoctrination, then little objection should be found. Values would not be stipulated, but students would be expected to identify, describe, and explain implicit as well as explicit values in a set of conditions and to be able to describe how such values would be applied in other circumstances. If concern exists about ethical and unethical behavior then some type of value objective should be part of business and economic courses.

In any given situation, the student might be asked to differentiate issues

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[4]Simon, Sidney B., and deSherbinin, Polly. "Values Clarification: It Can Start Gently and Grow Deep." *Phi Delta Kappan* 56:679; June 1975.

[5]Dewey, John. "What Psychology Can Do for the Teacher," in Reginald Archanbault, editor. *John Dewey on Education: Selected Writings* (New York: Random House, 1964) quoted by Kohlberg, Lawrence, in "The Cognitive-Developmental Approach to Moral Education." *Phi Delta Kappan* 56:670; June 1975.

according to the following classifications: moral, definition, fact and exploration, legal, or frame of reference. Or, they might be asked to classify discussions as being persuasion-winning, feeling-unloading, problem-solving, sensible, clear in statement, relevant, or having continuity.

To return to the two course examples being used, value objectives in an economics course might include:

1. The student shall be able to discuss the value systems underlying the following economic systems: capitalism, socialism, communism.
2. The student shall be able to identify the values underlying the conflicts in setting national goals.
3. The student shall be able to name at least four major contributors to our standard of living and discuss how and why these have had this effect.
4. The student should be able to identify the allocation of factors of production to various kinds of demand and to discuss the desirability of such allocation.
5. The student should be able to describe the current role of government in our economy and to identify the values underlying this role.

In the area of insurance, value objectives might include the following:

1. The student should develop an awareness of the importance of life insurance in the person's budget and be able to discuss this.
2. The student should be able to discuss the issues involved in government insurance for old age, medicaid, medicare, and national health insurance.
3. The student shall be able to identify the issues involving sharing of economic risk and discuss the desirability of such sharing.
4. The student shall be able to explain what the individual rights and responsibilities provided by insurance are and to what extent this is necessary or desirable.

*Development of attitude.* Although some basic attitudes are well entrenched in individuals, this does not preclude development of those attitudes that result in more effective learning and more productive use of the results of learning. The development of a desire to learn and to continue to learn is an implicit attitude that education tries to develop. Other such objectives are the development of a willingness to use *data* as a source of questions, to consider a variety of points of view, and to make decisions based upon proof. From these rather general statements, more specific ones relating to the content of the course can be developed. For instance, in economics such objectives may take the following form:

1. Given the issues involving the stimulation of the economy through tax reduction, the student shall be able to develop a list of questions that derive from the situation.
2. Given the issue of government role in the economy, the student shall be able to identify and explain at least three different points of view.
3. The student shall be able to discuss the necessity of every citizen's having a basic knowledge of the economic system.
4. The student shall be able to explain the importance of knowing a political candidate's positions on economic issues.

5. Given the correct historical data about an economic situation and two conflicting opinions regarding that situation, the student will be able to discuss the differences and conclude which opinion rests on basis of fact and logic.

Some important attitude objectives in an insurance unit would be:

1. The student shall be able to demonstrate the desirability of carefully reading and studying the provisions of an insurance contract before signing it.
2. The student shall be able to explain why and how important it is to be careful in choosing an insurance company and/or agent.
3. The student shall explain the importance of knowing the protection a person's insurance policy covers and for how long.

## DEVELOPING THE EVALUATION INSTRUMENT

If the learning objectives have been clearly defined, the development of the evaluation instrument is simplified. A number of different techniques exist for such evaluation, the formal examination being only one. Other methods include such items as term papers, position papers, panels, debates, symposiums, role-playing, and quizzes—both oral and written. This chapter, however, will concentrate on the development of the formal exam. The factors involved can be applied to other types of evaluation procedures.

This means that the answers to the following questions have already been obtained.

1. What is to be evaluated (based on the objectives that have been developed)?
2. How is it to be evaluated (such as by observation, short quizzes, paper, formal examination, oral performance)?
3. Who will evaluate (the student or the instructor; in other words, self-administered or teacher-administered) the test?
4. When is it to be evaluated (at end of unit, at end of semester, at end of class period, or all of these)?
5. What standards of performance are to be applied (degree of accuracy to be achieved for various grade classifications and time to be allotted for completing the instrument)?
6. What weight is to be assigned to each unit evaluation?

*Concepts for an effective instrument.* Four concepts underlie any good evaluation instrument: validity, reliability, objectivity, and efficiency.

VALIDITY. Validity, as we all know, means that the evaluation measures what it is supposed to measure. Content validity means that questions or activities in the instrument are based on the appropriate content. No extraneous matter is included. For instance, this eliminates asking questions about obscure footnotes, merely to see if that footnote has been read. What is relevant should be taught and, therefore, learned. Only what was taught, or intended to be learned, should be tested. Content validity also implies that segments of the instrument are relevant to the instructional sequence and that the facts, concepts, and principles in the instrument are balanced relative to the importance of the objectives and the emphasis placed on them

during instruction. To determine content validity, test items are checked against the content and activities of the course that these items are intended to measure.

Another type of validity of concern is criterion-related validity. This involves prediction of behavior in circumstances related to that being tested, such as secretarial skills related to on-the-job performance, or inquiry skills involving economic data related to reading and comprehending current economic data on which national taxation policies are based. In election years, critical voting decisions may be based upon the use of such skills. The instrument may need to reflect such external criteria.

RELIABILITY. Reliability measures performance on a consistent basis. In other words, students with the same learning experience and the same intellectual level and motivation should score at approximately the same level. The same test given at different periods of time to the same type of students in a similar course should result in similar test scores. Although adjustments for it may not be possible, instructors should be aware that physical and mental conditions of students can vary greatly and may influence reliability. Also affecting reliability are ambiguous questions as well as the too easy or too difficult questions. Instructors must also be certain that criteria are applied uniformly to all papers.

OBJECTIVITY. By definition, this means that the instrument is free of subjective judgments. All conditions and qualifications necessary to get the correct response should be specified. The instructor should avoid items that pertain to opinion and theories about which there is little agreement unless, of course, the objective is to determine what the students' opinions are and how they use facts and logic to support their opinions. Preciseness, conciseness, and clarity in the statements of the test aid objectivity and, therefore, effective evaluation.

EFFICIENCY. An efficient test makes the best use of the instructor's and the student's time by producing a large number of independent scorable responses during the test period. However, whether objective or essay type tests are used depends on at which point the instructor has the most time. If more time is available for preparation than for scoring, the objective form of evaluation, such as multiple-choice, true-false, or matching should be used. If the reverse is true, the essay form should be used.

Both forms of tests can measure important instructional objectives. Both types can evaluate acquisition of concepts, principles and problem-solving skills. Both types use some subjective judgment, and the value of scores from both depend on the degree of validity and reliability present. A good evaluation instrument will, however, result in the following:

1. Evaluation of important learning objectives.
2. Emphasis on different learning objectives approximating emphasis given to these in the course.
3. Clear purpose of instrument. Is the purpose to determine level of mastery or to obtain comparison of one student with others. If the latter is true, enough items must be included to result in a distribution from high to low.

4. Stipulation of conditions under which instrument will be administered. This includes such factors as frequency of testing, number of items to be included, time to be allotted, and standards of performance expected.

When it comes to determining whether to use essay or objective format, the following factors should be considered:

1. Size of group. If the group is large, the essay form may be impractical. This would also be true of oral or demonstration tests.
2. Desirability of developing skill in written communications. If this is an important objective, then the essay form must be used. This objective can also be attained by requiring other written work such as a term paper.
3. Importance of expression of attitude, value judgments, or opinions. If these are important, the essay form gives students a greater opportunity for freer expression without conditioning from question structure.
4. Degree of reliability. Since a well-written objective test has more precise answers, it is generally considered to be more reliable.
5. Impartiality of evaluation instrument. Although some subjectivity exists in any format, the objective test is generally considered to be the more impartial because what the correct response should be is determined prior to administering; whereas, differences in method of expression may influence this scoring of the essay. Bias is more apt to creep into essay evaluation. This, of course, affects reliability as well.
6. Instructor's confidence in writing of objective questions compared to confidence in critical judgment of essays.

*The essay test.* The essay type of test is probably easier to write. Questions are easily derived from a well-written set of learning objectives. Common beginnings for essay questions are explain, describe, contrast, compare, discuss, develop, identify, give reason for, interpret, recommend, and summarize. At the time essay questions are written, the factors to be evaluated should be determined, such as kinds of facts expected to be used, kinds of inquiry and application skills expected to be demonstrated, and writing skills, if any, to be demonstrated. Relative weight must be determined, the number of credits must be assigned to each factor, and each factor scored separately. A model answer should be prepared so that the instructor has a common basis for evaluating each student's answer. No doubt there will be more than one essay question; so, for consistency and greater objectivity in scoring, all the answers to one question should be read before going on to another. To make sure that a student's response on the first question read does not affect the evaluation of the next question, papers should be shuffled after all answers of one question have been evaluated. Papers should be scored as anonymously as possible to avoid knowing whose paper is being evaluated. One way is to have students put their names on the back of test papers rather than on the front. The following essay question illustrates how knowledge, application, and value objectives can be evaluated in a single question on economics (refer to earlier discussion of specific economics objectives on which this question is based):

After identifying the basic economic problem, discuss how the capitalistic,

socialistic, and communistic system attempt to solve the problem, to what extent and why they are successful, and the values that underlie each system.

*The objective test.* Objective tests take more time to prepare, but are much easier to score. The number of questions is not as important as that critical aspects of learning objectives are measured. If a norm-referenced system is used, however, questions must range in difficulty and a sufficient number of questions must be included to assure appropriate ranking of students.

FREE RESPONSE. Two major categories of objective questions exist. In the free response category, items are written as direct questions or as an incomplete statement or question. The students form their own responses. Short answer questions and completion questions are the most common forms. The short answer items can be answered by a word, phrase, or simple statement. For example:

1. Define the term GNP.
2. The price of a product in a given period of time results from the relationship of what two factors?
3. Give two examples of government insurance programs.
4. What is the basis upon which a company fixes the premium amount on life insurance?

The completion item is a statement in which key words or phrases are omitted such as:

1. The price of a product in a given period of time results from the _____ of the _____ of the product and the _____ for the product.
2. Two examples of government insurance programs are _____ and _____.
3. The basis upon which an insurance company fixes _____ on life insurance is _____.
4. The measurement of national production which results in current _____ value of goods and services in our economy is called the _____ _____ _____.

In writing these types of questions, the instructor must choose items for which there is only one correct response. Avoid giving grammatical clues to the answer or lifting statements from the text; statements should be simple and precise. In completion items, only *key words* and phrases should be omitted.

FIXED RESPONSE. The second category of objective questions is the fixed response items. The student chooses the correct response from those that are included in the test items. These include true-false, matching, and multiple-choice items.

In writing true-false questions (a category that allows one of two responses only and can be written to result in yes-no, same-opposite, right-wrong, correct-incorrect responses), the instructor should avoid the following: ambiguity in statements, disproportionate number of true or false items, exact wording of the text, trick statements where correct response depends on unimportant points, double negatives, and complex sentences. Also to be

avoided are use of words such as always, never, or impossible, which generally imply a false statement, and words such as sometimes, often, as a rule, and frequently, which generally imply a true statement.

True and false questions resulting in answers based on learning objectives in previous illustrations in economics and insurance are:

1. The GNP is a measure of the price level of goods or services sold in our economy.
2. Prices of products in a given period results from the relationship of the supply of the product to the demand for the product.
3. An example of a government insurance program is medicare.
4. A yearly renewable plan is the basis upon which a company fixes the premium amount on life insurance.

Multiple-choice questions are considered discriminating questions since those students who have not met the learning objectives are less likely to provide the correct response. Multiple-choice items should be written according to the following steps:

1. Write a definite statement regarding the concept, or principle to be tested.
2. Determine the stem of the test item. This can be either a direct question or an incomplete statement.
3. Write the correct response and the alternatives to be used in the test item.
4. First, put correct response in the first position, and then vary randomly until deciding upon final placement.
5. Check list of test items to make sure correct response does not appear in the same position too frequently or inadvertently in some type of pattern.

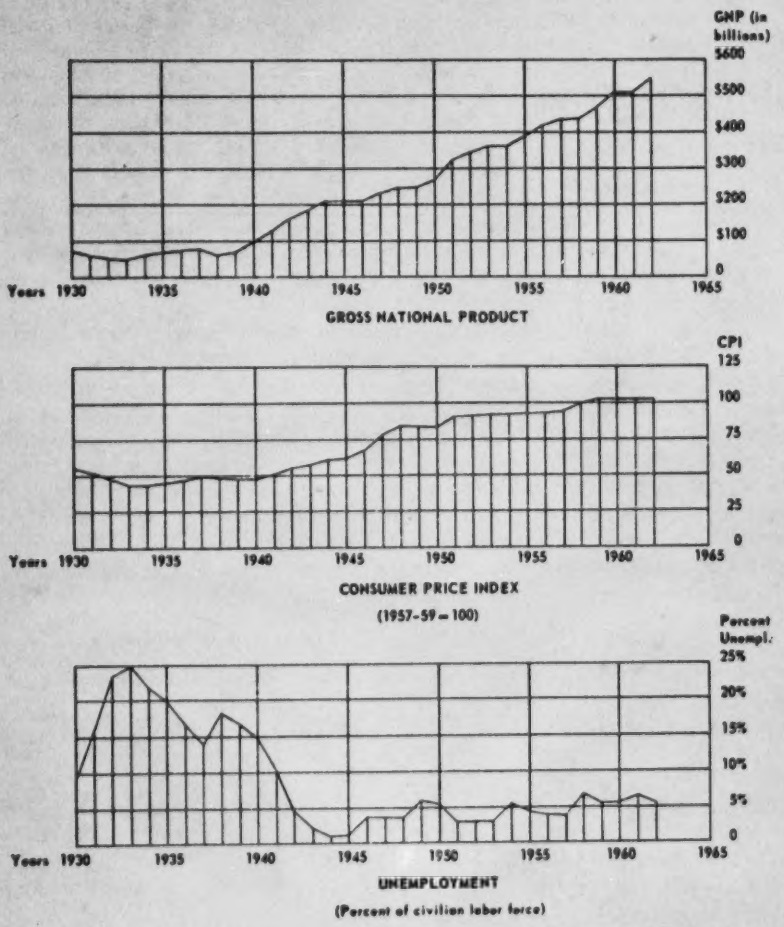
Multiple-choice examples are:

1. Gross national product is a measure of (a) the quantity of goods and services produced by private businesses; (b) the value of a nation's total output of goods and services sold; (c) the price level of goods and services sold; (d) that part of production that is used by government.
2. If the supply of a commodity increases at the same time as demand falls, in the absence of counteracting forces its prices will (a) rise; (b) fall; (c) stay the same; (d) be indeterminate.
3. What are two examples of government insurance programs? (a) health and fire; (b) social security and medicare; (c) medicare and health; (d) social security and term.
4. The basis upon which a company fixes the premium amount on life insurance is (a) a yearly renewable plan; (b) a mortality table; (c) group insurance; (d) reinsurance.

Guidelines also exist in setting up a matching question. Use only homogeneous material in a single matching item, include more elements in the second column than the first, keep the list brief, place shorter items in the second column, and arrange items in alphabetical order. The basis for matching should be clear, and it is generally a good idea to place all the elements for one matching item on the same page. Definition of terms in insurance, for example, would lend itself to a good matching item.

Sometimes, teachers feel that inquiry skills cannot be evaluated through a set of objective questions. Note how the following illustration of a chart and questions from a test on economic understanding based on the chart, can effectively evaluate a student's ability to analyze a chart or graph and come to a correct generalization.[6]

FIGURE I. Gross National Product, Prices, and Unemployment, 1930-Present




Source: *Economic Report of the President, 1963*

[6] From *Test of Economic Understanding*. © 1963, the Joint Council on Economic Education. Reprinted by permission of the publisher, Science Research Associates, Inc.

1. We desire a growing economy in which the price level is stable and employment reasonably high. Figure I shows that we have most fully approximated this ideal between (a) 1937 and 1938; (b) 1940 and 1941; (c) 1946 and 1947; and (d) 1955 and 1956.
2. Judging from your inspection of the three charts, which of the following seems to be the most serious economic problem of the immediate postwar period (1946-48)? (a) Decline in the output of the economy; (b) Inflation; (c) Unemployment; (d) Declining output per worker.
3. On the charts, note the behavior of the economy between 1950 and 1952. Which of the following statements most correctly analyzes the situation and states the most appropriate monetary and fiscal policies for these years? (a) The GNP is moving to an all-time high and prices are stable; no change in policy is called for. (b) Unemployment is rising; a budgetary deficit and/or an easy money policy is called for. (c) It is a period of inflation; a budgetary surplus and/or a tight money policy is called for. (d) Employment is falling and prices are rising; therefore a budgetary deficit and/or a tight money policy is called for.

*Evaluating the instrument.* To make sure that the evaluation instrument reflects the relative importance of various topics in the course content and the four types of learning objectives, an analysis chart similar to the one following can be developed.

On the stub of the chart, the topics of the instructional unit are listed. In the column headings, the types of learning objectives are listed. Under each learning objective is placed the number of questions, if an objective test, or the number of points, if essay, that should be allocated to each topic relative to the emphasis placed on the topic and objective in the instructional phase, or conversely, after developing the evaluation instrument, the questions, or points, can be tallied to see if the instrument emphasizes the same objectives and topics as the instruction did. The number of points that can be earned in each category of instructional objectives should reflect the emphasis placed on those objectives and on the various topic segments of the course.

ANALYSIS CHART FOR EXAMINATION ON INSURANCE

| Instructional Topics | Objectives | | | | |
|---|---|---|---|---|---|
| | Knowledge | Inquiry | Value | Attitude | Total |
| Terminology | 8 | | | | 8 |
| Economic risk and insurable interest | 6 | 2 | 3 | 2 | 13 |
| Need and role of insurance | 5 | 6 | 3 | 2 | 16 |
| Insurance coverage | 8 | 15 | 3 | 4 | 30 |
| Policy terms and conditions | 4 | 7 | 3 | 3 | 17 |
| Government involvement | 4 | 5 | 3 | 4 | 16 |
| Total | 35 | 35 | 15 | 15 | 100 |

The chart presented is not intended to recommend the emphasis to be placed on the various objectives but rather to illustrate how to determine how many questions should be asked relative to instructional emphasis. The following chart implies that equal emphasis had been placed on knowledge and inquiry objectives and that these two types of objectives had received the greatest emphasis compared to value and attitude objectives. Also, the topic which had been emphasized was insurance coverage. If these were not the course emphasis, then changes must be made in the evaluation instrument.

## GRADE ASSIGNMENT

Evaluation usually, but not always, results in an assignment of grades. When a criterion-based evaluation system is used, the grading is basically a pass-fail situation. The emphasis, as indicated earlier, is on what has been learned and not on ranking students. The most common condition applied to criterion-based tests is that 80 percent accuracy be achieved before students go on to the next unit. There is nothing sacred about the 80 percent figure. Whatever the figure used, a decision must be made as to whether passing is the equivalent of what would be considered a C or a D in a more traditional sense.

Unless the instructor has an unstructured class or an individualized instruction system, it may not be possible to implement a pass-fail grading system. Therefore, more discriminatory grading decisions will have to be made. It is not out of the realm of criterion-based evaluation to stipulate passing conditions and also a high performance condition such as:

> You should score at 80 percent or above to be certain you know and can use most of the concepts presented in the unit just completed. However, if you score below this, you should review the areas in which you were deficient. If you score at 90 percent or above, a note will be made that you performed at higher than average level.

A scheme for a semester grade, where this is needed, can be based on criterion-referenced tests. For example, to pass the course, a student might be required to have passed 80 percent of the tests at 80 percent or better for a D, to have passed 85 percent of the tests at 80 percent or better for a C, 90 percent of the tests at 80 percent or better for a B, and 95 percent of the tests at 80 percent or better for an A. In effect, an absolute grading scale is applied to a criterion-based evaluation system to satisfy administrative requirements.

Other grading schemes can be devised. Assuming 80 percent on a criterion is equivalent to a C; 85 percent can be stipulated as a B, and 90 percent at an A. Then for a semester grade each unit test would be weighted according to the importance of unit and emphasis placed on it in the instructional phase; and the weighted unit grades are averaged out for the semester grade. No one who completed the units satisfactorily would get less than a C.

If a norm-referenced evaluation system is used, the instrument must have enough questions to distinguish low achievers from high achievers.

This means that a certain percentage of students will receive A's, B's, C's, D's, or F's, following the familiar bell-shaped curve. The median, mode, or mean may be used as the starting point for such grading. Sometimes a modification of this is used to avoid giving the best score, which may be only average in performance, an A, or to avoid giving the lowest score an F, even though it demonstrates adequate performance. Thus, a floor is used for giving a passing grade, and all other grades are scaled from there; for example, setting 75 percent correct response as acceptable for a C and scaling other grades from there so that the best scores will receive at least a B, or possibly an A.

An absolute scale is sometimes used, whereby the percentage range of correct responses for the grade levels is stipulated. For instance, 92-100 = A, 91-83 = B, 82-74 = C, 73-65 = D. The assumption is that over a large number of tests, a "bell-shaped" curve will emerge, although this may not occur in a class in a given term. As with norm-referenced systems, a large number of scorable items are needed to insure this ranking of students.

The grade assignment, which may result from each evaluation of student performance and the term grade that must be recorded, will depend not only on the individual instructor's philosophy but also on the expectations of administration.

## SUMMARY AND CONCLUSIONS

If evaluation is made an integral part of the course plan and development of such evaluation occurs at that time, then the only activity left at the end of the instructional phase is the implementation of the evaluation system. The more detailed the plan for evaluation, the easier the actual evaluation of student performance.

One final point on evaluation needs to be made. In the introduction of this chapter, it was emphasized that evaluation should result in more than conclusions regarding student performance. After every evaluation activity, the instructor should use the results to generalize about total effectiveness of the course. The four questions presented in the introduction should be answered and should result in an improved situation for future students.

In conclusion, the steps for effective evaluation are as follows:

1. Develop teaching objectives.
2. Develop learning (performance) objectives.
3. Determine whether norm-referenced or criterion-referenced evaluation will be used.
4. Determine the specific questions to be answered or activities to be demonstrated in the evaluation.
5. Make sure evaluation meets tests of validity, reliability, objectivity, and efficiency.
6. Assign grades, if this is administratively necessary.
7. Analyze student performance in terms of how the unit could be more effectively taught.

CHAPTER 21

# Evaluating Instructional Objectives in Distributive Education

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Distributive education is an organized program of instruction for people seeking or holding occupations in the field of marketing and distribution. Distributive education includes subjects and experiences that contribute directly to increasing the relevant knowledge, skills, and ability of these people. It can also include subjects designed to train people for changing to a related job in another distributive occupation or for promotion to a higher level position.

Evaluation of student progress in distributive education involves value judgments based on personal observations, various rating sheets, laboratory or on-the-job performance, and various written tests. Evaluation in these cases becomes objective to the extent that definite standards can be set and appropriate evaluative criteria can be determined for each standard. It is relatively easy, for example, to set quotas for sales dollars produced or to establish a reasonable amount of stockwork or housekeeping duties to be accomplished. It is difficult, however, to measure the success of good human relations with customers, supervisors, or fellow workers, which is of utmost importance for successful marketers.

The material in this chapter is directed toward the inexperienced DE teacher at the high school level, but it should also serve as a valuable review for experienced personnel. It is an attempt to provide a basic student progress evaluation plan that a DE teacher or teacher-coordinator can adapt to his or her own situation, whether he or she is using a traditional evaluation system or a competency-based system.

## PLANS OF INSTRUCTION

First, there needs to be a rather clear-cut understanding of the objectives and capabilities of a distributive education program. Many states have or are moving to a three-year program starting at grade 10 and ending at grade 12 in the secondary program:

Grade 10—Introduction to Distributive Education
Grade 11—Marketing, Retailing, and/or Salesmanship
Grade 12—Cooperative (on-the-job training) or Laboratory (project plan) or School Store.

Some states start their programs in the middle school, fitting into the exploratory phases of the career education model, and other states use a combination of the cooperative and project plans. Whatever the program or the plan, certain evaluation must take place to measure student progress.

The capstone twelfth-year part of the program uses the project plan and/or the cooperative plan of instruction. The position taken here is that (1) the student-learner's career objective determines his/her program classification in pursuing either the project plan or the cooperative plan of instruction and (2) the subject matter presented in the related instruction accompanying either plan and the educational opportunities at the training station in the business community or at the work station in the project plan, as revealed by a carefully prepared training plan, determine how well a career objective may be served. Evaluation will assist in determining how well each career objective has been served and how far along in a career ladder a student has the potential to move.

The cooperative plan of instruction or the project plan of instruction is three-dimensional. Figure I visually presents the structure of the plans. This structure furnishes a frame of reference in presenting (1) the various elements in the learning process to be evaluated, (2) the relative weighting to be assigned to these elements, (3) the means of evaluating the elements, and (4) the standards against which the elements might be measured.

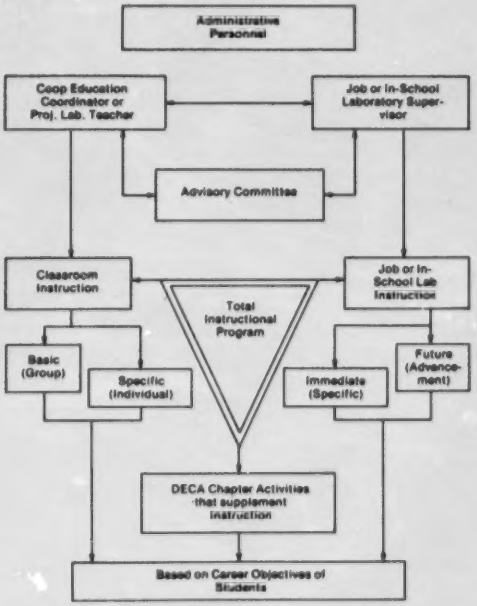



FIGURE I.
Organization of Instruction for Cooperative or Project Plan of DE Instruction

Appropriate evaluation of the extent to which each student has learned the material assigned in subject matter courses in the DE program and the evaluation of the competencies developed by the students in the classroom, laboratory, youth group (DECA), and training stations would measure the progress of each student toward his or her career objective. One might determine the relative importance of grades assigned to the progress of a student in each dimension (classroom, training station, DECA) by weighting the grades according to the amount of school credit earned by performing satisfactorily in each dimension. For example, if a student earns 1 unit for classwork and DECA and 1 unit at the training station, then each would be weighted 50 percent. On the other hand, if classwork is assigned 1 unit of credit, DECA 1 unit, and the training station 2 units, the weights would be distributed 25 percent, 25 percent, and 50 percent respectively. Often, each separate dimension of the program for which credit is given appears on the high school record with a grade for each dimension.

Figure I reveals that the cooperative plan of instruction is three dimensional—classroom (basic and specific), training station; and youth group co-curricular activities. Similarly, the project plan is three dimensional—classroom (basic and specific), project laboratory, and youth group co-curricular activities. Each dimension provides opportunities for evaluation.

The remaining sections of this chapter will deal with evaluation within the regular DE classroom and within each of these dimensions—related classroom, training station (using a competency-based training plan), project laboratory, and competency-based competitive events.

## EVALUATION OF REGULAR CLASSROOM INSTRUCTION

Evaluation of the student-learner in the classroom is based upon his/her performance (1) on written subject matter assignments, (2) on work in assigned manuals, (3) on oral presentations, and (4) on other individual and group projects. Traditional grading systems would call for evaluation on these areas of instruction to produce value points or percentages and letter grades with divisions such as below 70, F; 70-75, D; 75-85, C; 85-92, B; and 92-100, A; with the discrete allocation of letter grades being based on the normal curve distribution of scores if one is dealing with large groups or using standardized tests.

Most DE groups will not be large enough to produce a normal curve distribution of scores and most tests or evaluative instruments used in DE will be teacher-made rather than standardized. Therefore, it will be up to the teacher or teacher-coordinator to determine his/her own divisions in assigning letter grades.

## EVALUATION IN THE DE-RELATED CLASSROOM

Related classroom instruction uses group instruction to cover topics needed by all students in the class. Units of instruction such as the following fit this category:

1. Orientation to the DE cooperative program or to the DE project laboratory

a. Understanding responsibilities to school, employer, and fellow workers
b. Knowing purposes of the program and becoming oriented to rules and policies

2. Effective job performance
3. Personality development and adjustment
4. Employer-employee relationships
5. Co-worker relationships
6. Money management problems of the worker
7. Income and other taxes paid by employees
8. Essentials of social security
9. Labor-management relations
10. Insurance for personal living
11. Progress on the job
12. Dress and grooming.

Traditional evaluation of these units of instruction would be handled in a manner similar to the suggestions in the preceding section on evaluation of regular classroom instruction. If lesson planning and teaching/learning are competency based, then observable tasks learned in the classroom must be interpreted to the student in such a way that he/she knows the standard or level of performance expected and the competency to be observed by the evaluator. A student *passes* if the competency is demonstrated but *fails* if the competency is not demonstrated. Figure II shows distributive and marketing tasks converted to competencies.

**FIGURE II. Distributive and Marketing Tasks Converted to Competencies**

| Task | Standard | Competency |
|---|---|---|
| 1. Handle a difficult customer. | Effectively | Effectively handle a difficult customer so that the customer leaves the station in good humor. |
| 2. Dress appropriately for the job. | Store policy on dress | Dress in accordance with store policy for appropriate dress. |
| . . . . . | | |
| 7. Conduct self during interview. | Favorable impression | Conduct self during interview so as to make favorable impression. |

Source: Popham, Estelle; Schrag, Adele; Blockhus, Wanda. *A Teaching-Learning System for Business Education.* New York: McGraw-Hill Book Co., 1975. p. 455.

Job manuals or merchandise manuals may be evaluated by the use of a rating scale as shown in Figure III. The score may be converted to a letter grade by applying the score to a grade distribution of scores for the particular group of students.

FIGURE III. Rating Scale for Job Manuals and Merchandise Manuals

| *Criteria* | *Scale* | *Your Score* |
|---|---|---|
| Cover | 10 | |
| Content | 50 | |
| Originality | 20 | |
| Completeness | 5 | |
| Neatness | 5 | |
| Accuracy | 10 | |
| | 100 | |

## EVALUATION IN THE TRAINING STATION

Evaluation of the student-learner's on-the-job learning and his/her performance progress are based on (1) observations of the teacher-coordinator, (2) a check of the student-learner's weekly training station report, (3) the teacher-coordinator's discussions with the training station sponsor regarding the training plan, and (4) the employee rating sheet filled out by the training station sponsor.

Figure IV, on page 246, is a traditional form of student-learner rating sheet that may be used by the teacher-coordinator as he/she observes the student on the job and as he/she discusses the student's progress with the job supervisor. A separate form may be used for each evaluation period, or several evaluations can be placed on a single form by using different colors of marks for separate grading periods and connecting the marks with solid lines to compare profiles of progress or lack of progress from one evaluation period to another.

Figure V, on page 247, is an example of a student-learner weekly report that a student submits to the teacher-coordinator each Monday morning. It covers the previous week on the job. Each student may be evaluated according to how completely and accurately this report is prepared on a regular basis.

Assume that a training plan has been prepared on a competency-based plan of evaluation for 04.02, Apparel and Accessories. This general area of instruction in distributive education is based upon organized subject matter and learning experiences related to the variety of functions and tasks performed by marketing employees. These employees include management personnel in retail, wholesale, and manufacturing establishments primarily engaged in marketing clothing of all kinds, including related articles for personal wear and adornment. Curricular titles might be fashion merchandising, fashion coordination, history of fashion, and fashion trends. The curriculum may also include courses and/or units of instruction such as advertising, display, buying, credit, finance, storage, transportation, market research, insurance, and marketing management.

FIGURE IV.

DISTRIBUTIVE EDUCATION PROGRAM
CENTRAL HIGH SCHOOL

Student-Learner Rating Sheet

| Coordinator | Grade Period | Name of Student |
|---|---|---|
| Telephone: School_____ Home_____ | | |
| | Training Station | Sponsor |

The distributive education training program is a cooperative effort between business and the school. This rating sheet will furnish a means by which the business and the school may cooperate in rating the performance of the trainee, to help the teacher-coordinator to determine a proper grade for the training period and in counseling with the trainee.

Please indicate on the scale below your estimate of the trainee's performance in relation to his personal ability or the needs of the job. (EXAMPLE: If "courtesy habits" would be rated by you as about average, consider 80 as average and place an X mark on the solid scale line where you would rate the trainee numerically).

| | 100 | 90 | 80 | 70 | 60 |
|---|---|---|---|---|---|
| **PERSONALITY TRAITS** | | | | | |
| 1. Courtesy habits | | | | | |
| 2. On-the-job sincerity | | | | | |
| 3. Appearance suitable to work | | | | | |
| 4. Habits of honesty (time, money) | | | | | |
| 5. Cleanliness habits | | | | | |
| 6. Getting along with customers | | | | | |
| **WORKING HABITS** | | | | | |
| 1. Initiative | | | | | |
| 2. Accuracy | | | | | |
| 3. Ability to follow directions | | | | | |
| 4. Promptness | | | | | |
| 5. Getting along with fellow workers | | | | | |
| **BASIC FUNDAMENTALS** | | | | | |
| 1. Merchandise information | | | | | |
| 2. Arithmetic | | | | | |
| 3. Speech, ability to convey ideas | | | | | |
| 4. Written communication (writing) | | | | | |
| 5. Sales ability (if applicable) | | | | | |

NOTE: Please use the back of this rating sheet for any additional comments which may be helpful in advising the trainee on how his work can be improved.

A training plan should outline competencies expected of a student-learner at the completion of units of related instruction or specific projects in the classroom and after areas of supervised training on the job (see Figure VI on page 248 for an outline of one section of a training plan). Evalua-

tion would be based upon how well the student achieves the competencies at the end of each evaluation period. Evaluation and training would be competency based to the extent that student-learners repeated the study of knowledge or the practice of skills until he/she had attained employability in each competency, or a rating of pass. If the teacher-coordinator had to assign letter grades, no-pass could be an F, pass could be a C, excellent could be a B, and superior could be an A.

FIGURE V.

DISTRIBUTIVE EDUCATION
ALTON SENIOR HIGH SCHOOL

Student-Learner Weekly Report

Week Ending: _____

Trainee: _____ Training Station: _____

1. What were your activities on the job this week?

2. How did you apply classroom materials to your job?

3. What new job or procedures did you learn from your work?

4. What mistakes did you make? How did you handle the situations?

5. What problems came up on which you would like help or class discussion?

6. Give a description of the most interesting experience you had on your job?

7. What related materials did you read outside of class?

| | Weekly Time and Wages Summary | | | COMMENTS: |
|---|---|---|---|---|
| Date | Time Worked | Total Hours | | |
| | | Regular | Overtime | |
| | to & to | | | |
| | to & to | | | |
| | to & to | | | |
| | to & to | | | |
| | to & to | | | |
| | to & to | | | |
| Total Hours Worked | | | | |

Hourly Rate: _____ Wages Earned: _____

_____
Signature

FIGURE VI. One Learning Activities Section from Competency-Based Job Training Plan
04.02 Apparel & Accessories

| Learning Activities | Evaluation | | |
|---|---|---|---|
| | Pass | Excellent | Superior |
| **Salesmanship:** | | | |
| 1. Greets all customers courteously | ___ | ___ | ___ |
| 2. Demonstrates merchandise effectively | ___ | ___ | ___ |
| 3. Measures customer for correct size | ___ | ___ | ___ |
| 4. Measures customer for clothing alterations accurately | ___ | ___ | ___ |
| 5. Closes sales effectively | ___ | ___ | ___ |
| 6. Suggests additional merchandise | ___ | ___ | ___ |
| 7. Completes forms accurately | ___ | ___ | ___ |
| a. Charge slips | ___ | ___ | ___ |
| b. Layaway slips | ___ | ___ | ___ |
| c. Sales slips | ___ | ___ | ___ |
| 8. Operates cash register accurately | ___ | ___ | ___ |
| 9. Receives cash, makes change, handles checks accurately | ___ | ___ | ___ |
| 10. Computes required taxes accurately | ___ | ___ | ___ |
| 11. Wraps or bags merchandise properly | ___ | ___ | ___ |
| 12. Completes orders made by telephone accurately | ___ | ___ | ___ |

## EVALUATION IN THE DE PROJECT LABORATORY OR SCHOOL STORE

Instruction in a DE project laboratory consists of related instruction (basic and specific) and projects designed around work stations to simulate tasks performed on the job in various distributive occupations found in an employment community. For example, with appropriate equipment and properties, work stations are provided to give the student-learner experience in ordering merchandise, receiving and marking merchandise, pricing, advertising, displaying, selling, making markdowns, and carrying out special sales.

In a large high school or a large area vocational school, specialized marketing may be provided through a project laboratory or a school store. For example, a supermarket checkout station, supermarket merchandising, petroleum merchandising, a bookstore and supplies operation, or a variety store operation are provided.

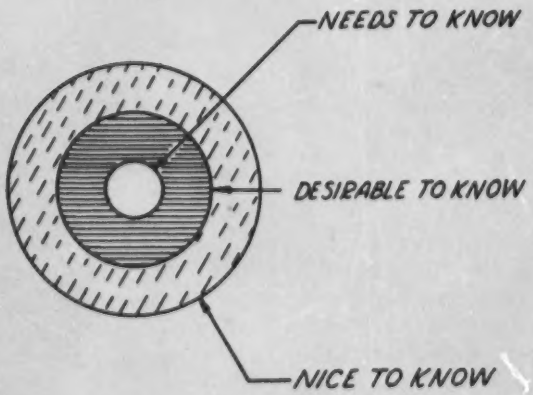
Related classroom instruction designed around large group or small group instruction is evaluated as described earlier in this chapter. A competency-based training plan or project is provided for each work station in a laboratory or store. Evaluation is based upon how well each student performs at each station. Ideally, each student must perform the activities at each station or on each project to the standard and according to the criteria indicated as satisfactory in actual employment before he or she passes.

Individualized related instruction required by student-learners is usually provided in self-contained learning activity packages (LAPS) which have

been developed and validated. Each LAP contains a rationale, prerequisites, behavioral objectives, preassessment, learning activities, and postassessment for a task or set of tasks. The preassessment assists the student and teacher to determine what review or learning needs to take place before the student can be successful with the task or set of tasks. The postassessment becomes the evaluation to signal satisfactory performance (pass) enabling the student to go to the next LAP or unsatisfactory performance (no pass) necessitating a looping back through the tasks. Several states are members of the consortium housed at Ohio State University providing the Interstate Distributive Education Curriculum Consortium (IDECC) materials all of which are performance based. Other states are members of the V-Tecs consortium providing task lists as a basis for project planning or curriculum planning for competency-based educational experiences.

Evaluation of work station performance in laboratories or stores should be based on successful performance of minimum skills and learning of minimum knowledge required to be successful on the job. The teacher should tell students what they need to know in DE occupations reflected in their stated career objectives. The students should learn the skills and knowledge sufficiently well to perform at a 100 percent level to earn a grade of C (and should get an incomplete until they complete the minimum). Students might receive a "B" for completing what is "desirable to know" in addition to "needs to know," and an "A" for extra assignments ("nice to know") in activities above and beyond that needed for above satisfactory performance in their stated objectives. Figure VII illustrates the three primacy of instruction categories (needs to know, desirable to know, and nice to know) just mentioned.

FIGURE VII. The Primacy of Instruction



## EVALUATION IN DECA COMPETENCY-BASED COMPETITIVE EVENTS

As a part of the instructional program, DECA is co-curricular, and some of its activities take place during school time just as any other instructional activity. DECA has successfully motivated both high school and community college students toward careers in distribution, primarily because of the competitive activities and conferences.

A relatively recent innovation is the development of competency-based competitive events and their successful use by both high school and junior collegiate divisions. Collegiate DECA is moving in this direction so that students aspiring to become teacher-coordinators have the opportunity to demonstrate observable skills upon which they are evaluated.

Material from the *Competency-Based Competitive Event Handbook* for writers of events used in 1977 will illustrate evaluation techniques used. In the competency-based competitive events program, major focus is upon criterion-referenced tests. This means that student competency is being measured against a performance standard or a given "criterion of behavior." Any test item in a criterion-referenced test must be representative of the tasks identified in the behavioral objectives as written from the competency. That is why it has been suggested that behavioral objectives be written from each competency; this will permit identification of components of the competency and then the performance criteria can be described more carefully.

Many methods or media may be used to evaluate competencies. The following have already been used in writing competency-based national events for DECA:

1. Observation of behavior by qualified judges with valid rating instruments
2. Oral reports to judges and/or tape-recorded reports
3. Written activity (i.e., manuals, solutions to problems, case studies, planning, buying, or promotional activities, development of training manuals, and the like)
4. Paper-and-pencil tests
5. Actual performance in industry environment
6. Construction of displays, advertisements, traffic flow charts
7. Videotape, slide-tape, and similar presentations with accompanying written and/or oral questions and written and/or oral responses
8. Filmed human relations/communications problems
9. Role-playing
10. Operation of equipment in simulated environment or in industry
11. Completion of typical industry forms or reports (i.e., inventory records, sales checks, bank deposit slips, order forms, and the like)
12. Analysis of completed industry forms or reports
13. Team events and observation of team efforts
14. Telephone (teletrainer) activity
15. Interviewing.

In the development of evaluative instruments for measuring DECA competitive events, care is taken to ensure that all paper-and-pencil test items are directly related to knowledge or attitudes needed for the competency. For example, some competencies in some instructional areas (mathematics, merchandising, product and service technology) are usually best measured through paper and pencil activity. But much of the measurement of competitive events is based upon observation, and appropriate methods become ranking, rating, checklists, and product scales.

## SUMMARY

Periodic evaluation in the distributive education program is important all through the various areas and levels of instruction—orientation, exploration, foundation courses, related instruction accompanying projects in the laboratory, related instruction in the cooperative plan, training station instruction, laboratory projects, and DECA competitive events. The DE teacher and the DE teacher-coordinator should remember that the most objective evaluative test or instrument is one that is teacher-made to cover learning experiences carried out rather than one published to accompany instructional materials unless all of the published materials have actually been covered. It is the teacher or teacher-coordinator who must tailor evaluation to measure what has been stressed or covered in a given unit of instruction. An evaluative checklist or scale must be criterion-referenced, that is, based upon the important behavioral objectives set as goals by the learner as he/she learns to carry out the observable acts in the "needs to know" category of his chosen occupation. It is a valuable service to graduating students and to prospective employers to provide a certificate of graduation from the DE program itemizing a list of competencies each student has performed successfully which they may use during the employment process.

CHAPTER 22

# Evaluating Instructional Objectives in Cooperative Programs

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Part-time cooperative office education has received a great deal of attention in recent years. It provides the means by which students combine work experience with in-school education. Although the curriculum pattern varies, cooperative education combines practice with theory, a principle that has received steady support over the years. Interest in cooperative education as an integral part of the total program of vocational education has increased. Many educators believe that no other learning procedure can rival cooperative work experience as a motivating factor for students to achieve the goals they have set for themselves. They believe that cooperative education not only contributes to occupational competence but also makes learning a pleasant and more meaningful experience for most students.

Cooperative office education may be defined as a program of vocational education developed jointly by the school and business in which job skills and adjustment are secured through an organized sequence of supervised job experiences in paid part-time employment and through classroom experience in related instruction. When properly organized, cooperative education provides the necessary articulation between academic theory and the world of work and helps the students make a supervised transition to the role of employed workers. It introduces students to the problems of human adjustment to the fast changing world of work technology and provides an opportunity to develop positive on-the-job attitudes and personality characteristics. Students become directly involved with new procedures and machines and learn to recognize the importance of desirable attitudes and acceptable behavior as they work with others in the adult world.

## FUNDING FOR COOPERATIVE EDUCATION

Federal legislation has had an impact on many educational levels and on many educational programs, including cooperative education programs. The Smith-Hughes Act of 1917, the George-Dean Act of 1936, and the George-Barden Act of 1946 provided federal funds for the support of programs in trade and industries, agriculture, home economics, and distributive education. Although business education was not reimbursable by federal funds until the Vocational Education Act of 1963, a number of cooperative

office work experience programs was established throughout the United States and were in existence before that date.

The Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 gave great impetus to cooperative education and to the cooperative office education movement. Support for cooperative education was evident on both the state and national levels. There were national pressures for the continuation and expansion of work experience programs, and the Vocational Education Amendments of 1968 suggested that such programs be similar in pattern to the programs of cooperative education which had proved to be successful.

Cooperative office education was authorized in the Education Amendments of 1976. Funds are available to the states for use in establishing or expanding cooperative vocational education programs through local educational agencies with the participation of public and private employers to provide training opportunities that otherwise may not be available. Emphasis is placed on establishing procedures for cooperatively identifying suitable jobs and providing on-the-job training related to career opportunities and career development. Also suggested is preservice and in-service training for teacher-coordinators to ensure quality in supervision and in developing curriculum materials. Evaluation of cooperative education programs to determine their degree of success is imperative. Priority for funding is given to areas that have high rates of school dropouts and youth unemployment. Funds made available to the states for cooperative education shall be in accordance with five-year state plans and annual program plans, and specific amounts to be granted must be spelled out by the state.

## COMPREHENSIVE VOCATIONAL PLANNING MUST BE PROVIDED

In order for cooperative education to be effective, it must be a part of a comprehensive vocational education plan. Since 1968, increased emphasis has been placed on planning and accountability in vocational education to lead to greater program productivity and efficiency. Each state must prepare an annual and a five-year program plan. The annual plan must include a statement of needs, goals, performance objectives, and desired outcomes.

Cooperative vocational education, therefore, must be evaluated in the overall context of the total vocational education program. In establishing a system for evaluating the attainment of instructional objectives for cooperative education in a school district, major components of comprehensive vocational education planning and accountability must be provided and considered, such as:

1. Current and usable information on the district's population seeking or needing cooperative education
2. Current and usable information that identifies and projects job market opportunities and needs in the labor market served by the district
3. Job performance requirements that specify and update, as a basis for instruction, skills and knowledges required by each occupation in the program

4. Long- and short-range planning of cooperative education offerings to meet the needs of the district's population and the labor market the district serves
5. Public information and a public relations program to inform the public and potential participants of the opportunities, strengths, and merits of the program
6. Emphasis on student recruitment by identifying and enrolling those students and potential students who can benefit from participation in such a program
7. Provision of resources and services necessary to maintain, expand, and improve the program as the need arises
8. Counseling and guidance to assist individuals in making meaningful and informed occupational choices from the options available
9. Assistance to students desiring employment to become employed in situations that fit their needs and the needs of employers
10. Provision of instruction to meet the needs of the students in the district
11. Review of the program in relation to the total school program
12. Ongoing and periodic evaluation as a basis for program decisions and improvement.

## IDENTIFICATION OF NEEDS TO BE MET BY COOPERATIVE EDUCATION

When program planners make decisions regarding the scope and content of any program, they must consider the needs of the people who will be involved. A resource guide for New Jersey cooperative office education coordinators has identified the following needs to be met by good cooperative vocational education.

I. Student Needs
   A. Need for balanced training
      1. Technical competencies
      2. Occupational adjustment competencies
      3. Career development competencies
   B. Need for help in bridging gaps
      1. Between theory and practice
      2. Between school and adult life
      3. Between generations
   C. Need for gradual transition between school and work life
      1. Time to adjust traits and habits
      2. Assistance in making transitions
   D. Need for better motivation
      1. More relevant subject matter content
      2. Content in natural context—easy to see where it fits
      3. Immediate application of material in tryout situation

II. Employer Manpower Needs
   A. Need for trained employees

B. Need for consistent supply of good employees
C. Need for good relations with school and community

III. School's Needs in the Area of Curriculum and Instruction
A. Need to extend program to additional students
1. Additional regular students
2. Students with special needs
B. Need to provide training for additional occupational field
C. Need to complement existing vocational offerings
1. Better training in development of occupational adjustment competencies
2. Better training in development of career development competencies
D. Need for relevant, up-to-date curriculum content
E. Need for more effective vocational guidance

IV. School's Administrative Needs
A. Need for economy—utilization of employers' facilities
B. Need for strong community relations—involvement of community groups
C. Need for good attendance and discipline—better attendance and discipline
D. Need for placement of graduates

## NEED FOR FORMAL EVALUATION OF PROGRAM

Regardless of whether or not it is acknowledged, informal evaluation of cooperative education programs is going on all the time by a wide range of persons. In addition to the teacher-coordinator, the students, and the employers involved in the school's cooperative office education program, there are many others who may be aware of the program's existence. Parents, advisory board members, school administrators, state department personnel, other teachers—both business and nonbusiness, nonparticipating students, and nonparticipating companies may have opinions regarding the effectiveness of various aspects of the cooperative education program and the value of participating in such a program. Not all may share the conviction that a cooperative education program is needed. Some may point out that many students complete such a program and benefit little by it and that still others become good workers without participating in a cooperative education experience. There may be concern that the work is not cooperatively planned and that there is little related instruction.

Work experience and classwork should be as closely related to each other as possible. The value of related classroom instruction as it specifically applies to the needs, career goals, and interests of the students and the work for which they are being prepared should be apparent. The classroom work should take on new significance for the students as they recognize the need for certain knowledges and skills. Instruction can be modified to allow students to learn fundamental job requirements. Guidance and counseling should be available to ensure that all of the interests and capabilities of the students are developed in relation to their career objectives and to assist the students in the transition from school to work.

Systematic evaluation is essential if high-quality programs of cooperative education are to be maintained. In order to assess thoroughly and objectively the strengths and weaknesses of a cooperative education program, systematic evaluation procedures must be developed and utilized. Attention must be given to state policies regarding evaluation procedures and the data required of cooperative education programs. Policies and practices of individual school districts must be considered, and good evaluation practices must be utilized when developing a total evaluation system. In the past it often has been the practice to make a subjective appraisal of a program's quality by reviewing such factors as program organization and administration, instructional procedures, physical facilities, community relationships, and apparent acceptance by employers. With the advent of more sophisticated research and evaluation techniques in education, there has been a trend toward more objective evaluation based on program outcomes that place emphasis on the product generated by the program as compared with the stated goals and objectives. No longer is it acceptable to limit evaluation to discussing in general terms the advantages of a teaching approach or of a teaching program. Emphasis has been placed on teaching accountability, on evaluating instructional outcomes, and on measuring student performance, attitudes, and knowledges as a direct result of instruction. Therefore, general or informal evaluation must be supplemented by a well-defined comprehensive evaluation system that provides for the evaluation of all of the components that comprise a total educational approach or program. A continuous evaluation of program objectives, content, methodology, and student performance must be provided.

## DESIGNATING BROAD INSTRUCTIONAL OBJECTIVES FOR COOPERATIVE EDUCATION

Each school district must decide upon the goals and objectives of its program and organize it accordingly. Broad instructional objectives for cooperative education programs have been designated by many states and school districts. In the resource guide prepared for cooperative office education coordinators in New Jersey, it is stated that cooperative education should do the following:

1. Make school more meaningful for the many young people who find the curriculum too deeply rooted in academic tradition to meet their needs.
2. Provide opportunities for intelligent career choices.
3. Provide effective job training for students who seek full-time employment after graduation.
4. Provide experience in productive work under conditions of regular employment.
5. Make the students understand the importance of being able to follow directions and to accept supervision.
6. Provide opportunities for students or small groups of students to follow directions and to accept supervision.

7. Provide education that will allow youth to increase their productive capacity and earning ability.
8. Promote the feeling of self-respect and achievement in students.
9. Provide an opportunity for the development of leadership qualities, civic responsibilities, and social intelligence.
10. Provide the opportunity to understand the functions of management, government, and employees' organizations in his/her occupation.
11. Provide both the financial means and the incentive to secure advanced training in the occupation of his choice.
12. Provide an opportunity to meet community needs for office employees.
13. Encourage graduates of the high school to become employed and remain in the community.
14. Provide an opportunity for students to make social adjustments and to develop the ability to work with co-workers and superiors.
15. Encourage good attendance in school and on the job.

It is important to inform the students, school administration, faculty, parents, and cooperating firms of the goals and objectives of the program. It is essential, also, that the evaluation process be understood and accepted by all involved with cooperative education.

## PLANNING FOR ATTAINMENT OF STUDENT OUTCOMES

In planning and organizing the related class instruction for cooperative education, attention must be given to providing for student acquisition of technical, occupational, and career development competencies. Planning for instruction should include both group and individual teaching and learning approaches and activities. In order to determine which approach to use, the competencies desired may be classified as those that are general in nature and related to all jobs; those that are common to an occupational cluster, such as business and office; those that are common to all who work in one occupation; and those competencies that are unique to an individual job. It is important that the teacher-coordinator become familiar with the possible types of content in order to plan for and provide appropriate kinds of instructional units and activities.

When the instructional units have been determined in either an individual or a group learning situation, specific unit objectives must be identified and stated in behavioral or performance terms. This should assist both the teacher and the students in determining the specific goals of each unit and how the goals are to be met. It also should provide a clear basis for evaluating the accomplishment of the goals.

Units may be broad in scope and cover such wide areas as developing desirable personality traits, preparing for employment, and meeting the public. They may be as specific as preparing for the interview, using a particular type of calculator, or improving one's personal appearance. Regardless of the topic or unit scope, the greatest degree of flexibility should be permitted to allow students to learn what they need. Whether using the

traditional or the competency-based approach to instruction, continuous evaluation should be provided.

## DEVELOPING SPECIFIC INSTRUCTIONAL OBJECTIVES

In addition to broad objectives, an effective instructional program in cooperative education must have specific, well-defined objectives. These specific objectives must be expressed in terms of certain desirable skills, understandings, and attitudes to be acquired by the student. Means for measuring and evaluating the extent to which these objectives are being realized must be designed and should be consistent with established learning principles. It is important that the instructional objectives be realistic and take into consideration the needs, abilities, and occupational goals of the students. Enough flexibility should be provided to accommodate differences in student needs and abilities. In addition, such objectives should be kept current and reflect the needs and requirements of the occupations involved. All legal, professional, and other related requirements must also be considered.

In order for a coordinator to evaluate student outcomes, the major objectives for which an appraisal is desired must be identified and defined. Then each objective must be analyzed and developed in terms of expected performance.

After the objectives have been identified, a determination must be made as to the kinds of learning experiences and activities that must be provided by the teacher so that the desired objectives can be attained by the students. As in any vocational program, specific instructional objectives should be based upon and should attempt to meet the career goals of the students enrolled in the program and should assist in their career development. Since cooperative education is supposed to meet the individual needs of each student and since learning is essentially an individual happening, it is imperative that the teacher-coordinator become familiar with the needs and goals of each of the students. Additionally, a sequence of instruction must be developed for each student. Such an instructional sequence must correlate the related class time and the on-the-job experiences in order to provide a total learning environment. Because teaching is a process of deliberately managing the learning environment and learning activities in such a way as to bring about desired behavior or outcomes, specific instructional or performance objectives must be identified to provide the purposes and guidelines for instruction for the teacher. In addition to the teacher's being conscious of these specific objectives, it is necessary to formulate and to share these objectives with the individual students to avoid confusion and lack of learning purpose.

## USE OF TRAINING PLANS FOR PLANNING AND EVALUATION

Of valuable assistance to the coordinator in achieving the desired learning environment and thereby contributing to the total effectiveness of the cooperative program is the use of carefully prepared training plans. For

some reason, training plans have not achieved widespread use by cooperative office education coordinators. Such plans have much potential and could become an important part of the total evaluation process. When properly developed and used, they can be beneficial to the students, the employer, and the coordinator as these individuals concern themselves with identifying objectives, as they attempt to meet objectives, and as they evaluate the extent to which the objectives have been accomplished.

Before training plans can be developed, the occupational goals of the students must be identified. This must be accomplished in such a way as to involve the total career education and career development process. Then, if cooperative education is to be a truly cooperative endeavor, there must be close cooperation in the development of training plans and mutual understanding of the goals to be achieved. The coordinator, the employer, and the student must be involved. Such plans assist in clearly establishing the individual competencies required by the students in the program based on their career objectives and aspirations. The plans also assist in identifying the types of experiences necessary to develop those competencies and in determining whether they will be provided on the job or in the classroom or both.

*Use of training guides.* Training guides may be used to indicate the range of possible activities and experiences for specific job titles and to eliminate much of the burden of the task analysis necessary to identify the progressive experiences and learning activities to be included in training plans. Such guides are useful in identifying common knowledges needed in occupational clusters and in assisting students in learning what is expected in various jobs. In addition, they may provide standards for the evaluation of potential training stations and for identifying areas for modification and expansion of activities and experiences for the progressive training plan for each of the students.

A number of studies have been completed that have identified tasks performed in a variety of specific jobs. The state of Virginia has developed model training guides to assist in the development of training plans. It was determined that more than 90 percent of all jobs held by cooperative office education students in Virginia over a five-year period were in the 15 job titles for which their model training guides were developed.

*Selecting suitable training stations.* Goals within the training plan must be realistic and provide for flexibility and adaptability. Skills and knowledges needed to obtain employment and to advance within an occupational cluster must be identified, and corresponding activities and experiences should be relevant. A list of potential training stations that may meet student needs should be developed. It is important to locate an employer willing to provide a work situation with the kind of experiences and supervision required by the students in the program.

It would be wonderful if the coordinator could locate training stations that offer all of the experiences needed by the students, but generally this is not the case. Therefore, the coordinator must determine which job is suitable for each student and then develop the job into a training station

that can effectively meet the student's needs. To do that, the coordinator must compare the training guide with the actual job and must convince the employer to modify the job whenever possible or add the additional training or experiences required to the classroom component of the program. Employers must understand the important responsibility they have in developing and in following training plans to assist in accomplishing the purposes of cooperative education.

*Value of training plans.* Planning should reflect an awareness that career objectives may change and that the development of training plans is a continuous process. The teacher-coordinator must of necessity assume the responsibility for initiating, developing, and adhering to the training plans until a mutual decision for change has been made. Such plans are of value to the coordinator in helping students with their career planning, in selecting suitable training stations for each student, and in orienting employers and training supervisors to their role in assisting students to make a smooth transition to the work environment.

In relation to evaluation, training plans help the coordinator to establish and evaluate job responsibilities and job progress and to improve the on-the-job training. Through the training plan, training supervisors can be advised of applications of classroom instruction to be made on the job, and the coordinator can become aware of the job skills and work adjustment competencies needing further emphasis in the classroom.

Employers should be able to evaluate their effectiveness by determining what their role is, or should be, in the program, and training plans could provide a means of assessing the extent to which they are fulfilling that role. As an important by-product, the use of training plans helps the employers to realize that they are part of a program that has been systematically planned and that provides for systematic evaluation.

The coordinator must teach each student how to use the training plan to continuously evaluate the program of instruction and to determine whether the desired outcomes are being achieved. Training plans should assist the student in determining and evaluating the relevance, relationship, and quality of in-school learnings and on-the-job experiences. Program modification, expansion, and improvement should be possible as a result of the information derived through the use of the training plan by all individuals involved in the planning and evaluation of cooperative office education.

## FRAMEWORK FOR EVALUATING THE INSTRUCTIONAL COMPONENT

In attempting to evaluate the quality of the instructional component of cooperative education, the coordinator might use the following broad questions to serve as a framework for measuring the total instructional area. An assessment instrument could be developed to provide for a specific quantitative response that indicates the extent to which various instructional aspects have been accomplished.

1. Are the overall objectives or goals of the instructional program of cooperative education clearly stated?

2. Is the nature and scope of the instructional content adequate to meet the objectives?
3. Are the expected outcomes for each instructional unit clearly indicated?
4. Is the organization and presentation of the instructional content well-organized and consistent with the specified objectives and desired outcomes of each unit?
5. Are the activities provided for meeting the instructional objectives tailored to meet the needs of the students being served?
6. Is there a wide range of activities provided to involve students in different kinds of learning activities both in school and on the job?
7. Has provision been made to provide alternative activities for students with special needs?
8. Is there a sufficient variety of instructional materials?
9. Are the available instructional and resource materials of sufficient quality and quantity to meet the needs of the students and to assist in reaching the expected group and individual outcomes?
10. Are the methods used for the presentation of the instructional units consistent with sound learning theory and knowledge of techniques for student motivation?
11. Have provisions been made to sufficiently provide individualized instruction based on specific needs and goals of the students?
12. Does the evaluation process assist in measuring student needs and accomplishments?
13. Are the methods provided for measuring achievement consistent with the expected outcomes?
14. Are the techniques and procedures for evaluation clearly identified?
15. Have provisions been made for pretesting and posttesting?
16. Do procedures exist for both group and individual testing?
17. Are the standards used to determine whether the objectives have been attained realistic in terms of occupational requirements and student abilities?
18. Is there sufficient flexibility in the evaluation process to meet any special student needs?
19. Are there established procedures for providing remedial work to assist in reaching outcomes that have not been accomplished?
20. Has a procedure been established for a continuing process of evaluation of the instructional component?

## EVALUATION BY OBSERVATION

Any accurate information that may help to indicate attitudes, understanding, growth, and achievement should be obtained. It is important that general principles of test construction be observed when constructing devices to gather such information to be used for measurement purposes.

It is acknowledged that there are certain outcomes of instruction that are difficult to measure adequately by either written or performance tests.

Evidence of learning and growth may be revealed best in situations when students are given the opportunity to actually apply the information, procedures, and principles taught. That, of course, is the basic underlying principle of cooperative education. It means, therefore, that the evaluator must make careful observations for the specific purpose of evaluating achievement. This, then, becomes an important phase of the evaluation of instructional outcomes of cooperative education and must be clearly defined and understood by the teacher-coordinator, the job supervisor, and the student worker.

Having clearly in mind what to observe is of paramount importance. Standards must be clearly defined, and attention must be paid to specific aspects of student performance. The quantity and quality of all the behaviors and performances must be examined carefully. Separate ratings should be given for each of the aspects involved rather than confusing or combining personality factors with work achievement. A method of recording the results of evaluation through observation must be devised that will be quick, clear, and comprehensive enough so that specific aspects of student performance can be discriminately rated independently of each other.

Rating scales, technique sheets, work habits inventories, and personality checklists have been designed to assist in measuring such characteristics as accuracy, perseverance, punctuality, courtesy, adaptability, and quality of work. Teacher-coordinators must adapt or develop such devices to assist them in evaluating student success. Again, the emphasis must be placed on determining instructional objectives and outcomes and designating and agreeing upon the types of behavior that will be accepted as evidence that the objectives have been reached.

## STUDENT EVALUATION OF THE PROGRAM

Student evaluation of the cooperative education program, of the instructional component and the on-the-job experiences, should provide valuable data that can be utilized to assess the program objectives and activities. Such evaluation should be an ongoing activity. To schedule student evaluations at the end of the program may be of limited value. Obtaining student feedback throughout the total program and devising specific methods for obtaining evaluations from the students may provide an opportunity to correct any program deficiencies or weaknesses that may exist.

The use of a rating form or student questionnaire provides a means for the students to evaluate either the instructional component or the total program. Different rating scales, including descriptive, numerical, graphic, and forced-choice scales, may be developed by the teacher-coordinator to elicit student response and to provide for easy administration and completion.

In addition to such group activity, the use of individual conference evaluation sessions may be extremely beneficial. Students can be selected to evaluate various phases of the program on a continuing basis. Rotating the students used will provide a broader response. The students should be notified of the purpose of the evaluations, and emphasis should be placed

on obtaining a candid response in order to provide the information necessary to improve instruction. All evaluative information collected from the students should be sorted and analyzed and consideration given to the way in which it can best be used to evaluate and improve the program.

## USE OF EMPLOYER SURVEYS

Surveys of offices and employers in the area should be considered as part of the total evaluation effort. In addition to the ongoing evaluation of students in the program, it is a good idea to contact those companies that have participated in the cooperative education program in the past and/or have hired graduates of the program. Such employer surveys should reveal what skills, knowledges, and attitudes are important on the job and should identify strengths and weaknesses in the performance of the program graduates.

A rating form that is easy to complete should be developed to ensure ease of response and to encourage employer participation. Attention must be given to the instructional aspect to be evaluated and the data required for such evaluation before the form is developed. Areas that could be evaluated through the use of such an employer survey form may relate to the program content as it pertains to the development of specific skills, attitudes, and knowledges as well as to an actual rating of the work performed by the cooperative education graduate employed by the company contacted.

In rating employee performance, the employer may be asked to compare the cooperative education graduate with other employees in the organization in the same grade and kind of work. They might be rated in such broad areas as work attitudes, attitude towards others, initiative, quantity of acceptable work, quality of work, and overall value to the employer. The need for further training might be indicated, and the potential for future advancement and success in the company might be assessed.

In addition to devising one's own evaluation instruments, questionnaires for making surveys of business offices and employers, for rating employees, and for making follow-up studies of program graduates may be found in the literature or may be obtained from various sources such as state departments of education. For example, the Bureau of Vocational, Technical, and Continuing Education of the Pennsylvania Department of Education has developed some questionnaires for use by school districts in making such surveys. Cooperative education teacher-coordinators or others responsible for evaluating cooperative education could modify such instruments to fit their particular needs. The kinds of information obtained from such surveys should be of assistance in evaluating the program and should provide a basis for maintaining, revising, or expanding the program content and instructional approaches.

## STUDENT FOLLOW-UP STUDIES

Student follow-up surveys may be conducted to assist in gathering data to determine whether the program is achieving its designated purposes and

objectives. Recommended times for such surveys vary; however, there appears to be agreement that a follow-up should be done within three months to one year after graduation to determine the number and percent of graduates employed, the jobs held, and the salaries of those employed. It should also reveal general and specific attitudes toward participation in cooperative education, extent of job satisfaction, areas of weakness in job preparation, and program changes recommended by the graduates.

If possible, another follow-up should be done three years after completion of the program to find out whether graduates are still employed and whether they were employed on a regular basis during that time span. It may be useful to know if the graduates changed or advanced in their job areas, received any additional education or training since graduation, or changed their attitudes toward cooperative education after three years.

Such follow-up studies or surveys should be uncomplicated and easy to complete. The information derived from these surveys should reveal the extent to which graduates of cooperative education programs obtain, hold, and advance in jobs related to the occupational field for which they were prepared. The degree of satisfaction former students experience in their jobs and the value that they attach to their preparation for employment in the cooperative education program are good indicators of how well the program enables students to attain the desired instructional outcomes of cooperative education.

## SUMMARY

Cooperative education should offer a diversified program of vocational instruction and should be coordinated with the total offerings of the school. It should provide instruction that is planned jointly by school and business. Careful and cooperative planning for the attainment of student outcomes is essential. An organized, up-to-date, and meaningful curriculum should be offered which includes student performance objectives based on an analysis of individual goals, needs, interests, and ability. A wide range of activities with designated, realistic standards should be provided in school and on the job. Systematic evaluation is essential if cooperative education programs of high quality are to be maintained. Evaluation must not be limited to discussing in general terms the advantages and disadvantages of cooperative education. Evaluation must be based on instructional outcomes with emphasis on achievement of stated program goals and objectives. Any accurate information that may help to indicate student attitudes, understanding, growth, and achievement should be obtained to assist in the evaluation process. Such information may be obtained through a variety of methods. It is essential that the methods used for evaluating the attainment of the instructional objectives be understood by all involved in the cooperative education program.

CHAPTER 23

# Evaluating Instructional Objectives in Business Communication

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Selecting assignments from the contents of a business communication textbook and evaluating those assignments are real problems for the beginning business communication teacher. In this chapter are listed the topics that recent research studies have shown as most appropriate for developing the communication skills and knowledges required in business today.

The results of surveys have reflected a need expressed by both employers and employees for oral communication skill; therefore, to make the course more relevant, business communication teachers are increasing the emphasis on the oral elements, with the necessary reduction of emphasis on written communication.

The participative method of teaching is recommended for business communication, which means a variety of teaching methods with more student activities taking the place of the lecture method. Reading assignments are discussed by the students with only teacher direction and clarification. A completely student-controlled class meeting every day is not intended here, for students need and want the benefit of the teacher's experience and advanced knowledge; and some material should be introduced with a lecture.

Before deciding which elements are to be included in the course, student objectives must be written. Such objectives should be based on the backgrounds, experiences, and goals of the students. Usually some amount of student resemblance exists in any one class because of previous courses they have taken together. General objectives should include the following:

1. To develop skill in thinking and communicating ideas orally and in writing effectively and efficiently
2. To understand the communication process and the barriers to communication
3. To increase listening skill
4. To solve communication problems
5. To become aware of nonverbal communication.

These objectives can be expressed more explicitly with behavioral objectives similar to the following:

1. To write a minimum of ten letters and memorandums according to text and teacher guidelines
2. To write a report demonstrating knowledge of how to collect, analyze, and report data

3. To give four oral talks
4. To participate in individual and group problem-solving experiences using oral and written cases
5. To pass four written quizzes and a final examination.

## COMMUNICATION THEORY, PROCESS, AND SEMANTICS

Although the introductory chapters of most texts include material on communication theory, process, and semantics, teachers should limit discussion of these topics to one or two class meetings. They should then continue to refer to these concepts throughout the course as a way of relating theory to application as students do assignments.

To understand the reasons for lack of communication or miscommunication between sender and receiver, students need to study communication barriers such as information overload, stereotyping, noise, word connotations, prejudices, suspicion, emotions, unfamiliar subject matter, and other related factors.

Knowledge of communication theory, including the communication process, semantics, and communication barriers, will be demonstrated later in written and oral assignments; but quizzes can tell the teacher whether the students have grasped these concepts before they get very far into the writing and speaking activities. The most important aspect of communication to stress is that all communication should be considered in terms of the reader, listener, or viewer rather than from the point of view of what the sender wants to write, say, or show.

## WRITTEN COMMUNICATION

The major written message in business is probably still the letter, although many large firms are reporting that the memorandum is the message most often written in their companies. Form letters are used, especially for routine and sales letters. Short reports are written by individuals, but longer reports are prepared by several individuals working together. The proposal is being used with greater frequency and should be included along with a short- or medium-length report in the business communication course. Other types of writing that can be included in the business communication course, if time permits, are abstracts, definitions, instructions, summaries, and cases.

*Letters.* The number of letters written in and out of class is determined by the class size and the total workload of the teacher. The American Business Communication Association Ad Hoc Committee on Course Standards recommended in 1973, for a class enrollment of 25, a minimum of 11 written assignments for a course in which the major emphasis is on written communication.

For the course with a balanced approach between written and oral communication, a minimum of 10 assignments is required. These include the writing assignments and the oral and visual presentations. For the

course with major emphasis on oral communication, a minimum of eight assignments is required, again divided among oral, visual, and written.

Although students should be cognizant of the special types of letters presented in the text, the letters written most frequently in business (and which, therefore, should be written by the students) are the inquiry, answer to the inquiry, request for adjustment, answer to the request for adjustment (both granting and refusing), sales message, and application for a job. Several studies have shown that both large and small companies use form letters for credit and collection and for offering and refusing employment.

Form letters are also used to answer inquiries, but this letter is a good type to use for the students' first letter problem. Although sales letters are usually written by outside advertising agencies, students enjoy being creative; and the parallelism between trying to sell a product or a service in a sales letter and trying to sell themselves to the point of getting an interview in the application letter makes the sales letter a worthwhile assignment.

If students are writing poor letters, inadequate planning and discussion before starting to write is probably the reason. The principles of effective writing as well as the objectives listed in each textbook chapter for various types of letters relating to the organization of the letter and to the opening and closing sentences should be discussed thoroughly. The students' letters will be of better quality when they clearly know as much as possible about the problem to be solved, the questions to be answered in the letter, and the assumptions that can be made.

Some teachers require all letters to be typed attractively with no errors in spelling, punctuation, and grammar. Not all schools, however, have typewriting as a prerequisite to the business communication course, or typewriters may not be available to all students. At least the sales and application letters and the data sheet should be typed so that students can demonstrate they know how an attractive letter should look. The transmittal letter with the report or proposal is additional evidence of their ability to prepare attractive and accurate letters. Even though someone else may be typing their letters, students approve them with their signatures. Whether the communication course is required or elected will have some bearing on the requirement that all assignments must be typewritten, since students do not elect a course for which they do not have the prerequisite skills.

Letters may be written in or out of class. There are arguments for each procedure. The majority of teachers use both procedures, having three to six letters written in class and five to seven written out of class. Some schools have restrictions on the amount of out-of-class work that can be included when figuring final course grades, regardless of the kind of course. Those teachers who argue for in-class writing contend that students need to be trained to think rapidly, just as they will need to do on the job. After the first two or three letters they write in class, students will be able to compose and write fast enough to complete a letter within 15 to 20 minutes.

A most important aspect of evaluation for the student is the immediacy of feedback. Written assignments should be returned within 48 hours, or the

contribution to learning diminishes rapidly. Besides, students worry and feel insecure when they do not know the results of their effort within the next day or two. They expect and have the right to know every day how they stand in the class and the kind of progress they are making. Students feel the teacher is unfair if they are not told how they can improve while there is still time for improvement.

Evaluation sheets can be furnished for each type of letter, or students can be told that their letters will be evaluated on the basis of the criteria described in the chapter. Attributes can be weighted according to their relative importance; for example, tone may be considered more important than conciseness; or language, style, organization, and content can be given relative weights. In using different weightings, a grade is given for each factor and then the four grades, more or less, are averaged using the F = 0 to 12 = A+ scale. Thus an average of 5 would be a C.

Another system of grading is to require a certain number of letters for an A, B, or C for the letter-writing part of the course. Students must rewrite unacceptable letters, usually those with a grade below B. Some teachers give a final grade of 75 for every letter that must be returned, a grade of 50 for a second return, and a grade of 0 for the third return.

When a teacher averages grades on written assignments for the entire course, there are advantages in weighting the papers for the first three-week period one time, the papers for the second three-week period two times, and those for the third three-week period three times. Two advantages of this system are, first, that students are rewarded more as they improve, and second, students who receive high grades at the beginning of the course cannot slacken their efforts, expecting that their early good grades will carry them through to a satisfactory final grade.

Helpful evaluation of written assignments requires writing detailed comments on the papers. If a teacher has large classes, time may be saved by furnishing students with a list of symbols such as the ones presented in the reference section of many textbooks. Or a numbered error list for such items as spelling, comma, negative word, etc., can be used; and the teacher simply writes the number of each kind of error on the paper.

Asking the students to evaluate their own letters occasionally can provide variety. Letters may be shown on an opaque projector so that the students can comment on their effectiveness. Or letters can be exchanged among students for individual critiques; and, as a follow-up activity, the students can answer each other's letter.

If no projection equipment is available, the teacher can prepare mimeographed handouts of good examples of letter-writing problems. After the models have been discussed, they should be collected for future use.

*Memorandums.* Employees working for large companies are more likely to be writing memorandums to other employees within the organization instead of letters to people outside the company. Some surveys have shown an increase in the use of memorandums along with a decrease in personally dictated letters.

The objectives for writing memorandums are the same as for letters

with the exception of a different format, less formality, and more conciseness. Since many companies prefer that their employees write memorandums in longhand to save time and stenographic costs, students need to realize the importance of legible handwriting; and most of them could profit from practice. Criteria for evaluating memorandums include the implementation of logical ideas, clear organization, completeness, and conciseness.

*Reports.* The report should be short with approximately 1,000 to 1,500 words or of medium length with 1,500 to 2,500 words. A longer report takes too much of the students' time in the basic communication course, where a variety of activities is desirable.

An evaluation criteria sheet such as the one on page 271 is a helpful guide for discussing how to plan and write the report and for determining the report grades. Since the report requires a great deal of time in gathering and organizing the data and in outlining and writing the final product, the grade should receive additional weighting when it is averaged with other writing assignment grades.

*Proposals.* The increasing importance of proposals in business and government should alert teachers to include this type of writing in the business communication course. Several topics can be given to the class for selection, including such ideas as building an airport near the town, providing a service to maintain the landscaping of the campus, and developing unused land into a city park. Students may also suggest good topics for proposal writing.

The decision to assign a letter proposal or a longer proposal of up to seven pages will depend on whether a short- or medium-length report (or no report) is assigned in the course. The evaluation criteria sheet illustrated on page 270 lists those factors that can be included in the proposal writing.

*Miscellaneous writing assignments.* If the business communication course is offered early in the curriculum so that students can use their writing skills in other courses, various types of writing can take the place of some of the usual letter assignments. Knowing how to write abstracts, proposals, definitions, instructions, and cases proves useful not only in other courses but has vocational value as well. These miscellaneous assignments can be weighted equally with letters.

ABSTRACTS. In writing abstracts, students must condense several pages of material into one or two pages, thus giving them practice in conciseness. Evaluation should include these factors: (1) all essential items in the report or article are covered; (2) the most important ideas appear first; (3) nonessential words are omitted; (4) no distortion or change in emphasis is made; (5) emphasis is on results, but approximately one-third of the abstract is devoted to material in the introduction and ending of the document; (6) length ranges between 100 and 250 words.

SUMMARIES. Business reports are accompanied by summaries at the beginning of the report to aid the reader in looking for certain information within the report. Evaluation should include these factors: (1) the length is limited to ten percent or less of the length of the full report; (2) the most important information is included in the summary; (3) no new material is

presented; (4) the summary is precise, clear, readable, and concise; (5) conciseness is achieved—but not at the expense of leaving out important facts or committing distortions by omitting words.

DEFINITIONS. An expanded definition is developed by giving examples, comparing and contrasting the subject with something known, classifying and dividing, naming the parts, and telling what the term does not include. Evaluation should include these items when applicable and, furthermore, preciseness in the choice of words that are suitable for the intended reader.

INSTRUCTIONS. Giving instructions is telling the reader how to perform a physical task. The term for the performance being instructed may have to be defined. Evaluation should include these factors: (1) completeness; (2) the inclusion of information about equipment, conditions, skills, or other facts that are necessary to understand the instructions; (3) the inclusion of reasons if physical danger is likely; (4) sequential steps; (5) short sentences; (6) a pleasant tone to ensure better cooperation; (7) illustrations and headings; (8) sufficient detail for the intended reader.

EVALUATION CRITERIA FOR PROPOSAL

Student Name _____ Subject _____

*Percent of Grade*

INTRODUCTION
- Services to be performed and for whom
- Benefits customer will gain by acceptance
- Personnel: qualifications, unique capabilities
- Facilities
- Materials
- Experience with customers _____ (25)

BODY
- Immediate background of the problem
- Logical presentation of facts, one leading to the next
- Strongest material first
- Solution: advantages over alternatives
- Skillful persuasion
- Benefits that will come from solution
- Reader adaptation _____ (30)

CONCLUSION
- Dates for beginning and completion
- Costs and method of payment
- Urge to action _____ (15)

ATTACHMENTS
- Illustrations: graphs, flow charts, figures, etc., properly referred to and clearly labeled _____ (15)

FORMAT
- Impressive: headings and subheadings
- Style: clearness of words, phrases, sentences; pleasant, interesting, positive tone _____ (15)

Grade _____

EVALUATION CRITERIA FOR REPORT

Student Name _____ Title of Report _____

_____

*Percent of Grade*

INTRODUCTION
- Background
- Statement of the problem or purpose
- Definitions, if needed
- Plan of presentation _____ (15)

CONTENT
- Adequate
- Timely
- Factual
- Evidence documented
- Clear relationship of ideas
- Organized
- Conclusions and recommendations _____ (50)

RHETORIC
- Coherence
- Unity
- Adaptation
- Readability
- Emphasis
- Tone _____ (15)

FORMAT
- Preliminary pages
- Headings and subheadings
- Graphics
- Appendix
- Bibliography
- Appearance _____ (10)

PROOFREADING
- Spelling
- Grammar
- Punctuation
- Typewriting _____ (10)

Grade _____

CASES. One of the skills that is improved through the use of case studies in a business communication class is reading. Students soon find that they must read carefully for meaning, consider the preciseness of the words, and look for the information needed to solve the problem under consideration.

The study of communication theory and barriers provides the *why* of communication, the written and oral assignments provide the *how*, and case studies provide *what* kinds of messages are to be used and *when*. Students sometimes remark that they would use the telephone instead of

writing a letter for a particular incident. The business communication course needs to take a broader approach in our technological society and include the consideration of alternative ways to solve a problem.

Problems at the end of chapters serve as an introduction to cases. Short cases requiring one or two pages of the written solution are preferable to longer cases, for students seem to lose interest in the longer ones.

Evaluation is based on the student's ability to (1) state the problem, (2) list the facts as distinguished from inferences, (3) give alternatives with advantages and disadvantages, (4) evaluate the advantages, and (5) choose the best alternative. These factors can be given equal weight and averaged for the case problem grade. Of course, if the problem is not correctly identified to begin with, the paper deserves an F.

## PROOFREADING AND EDITING

Whether grammar, punctuation, and spelling assignments are included in the business communication course depends on the nature of the class. If the course is required, a large number of students will need review work on the mechanics. Usually, students who have a poor foundation in English do not elect a course that will give them difficulty; however, there are a few exceptions.

Most classes can benefit from a review of the reference section in the text; and a few short pretests can tell the teacher how much review is needed. Handouts on proofreading and editing procedures serve as guides for the teacher and the students to use in diagnosing problem areas. For those students who are seriously deficient, workbooks or teacher-made materials are effectively used on an individual basis. Students will find more relevance if they can see how faulty mechanics act as a barrier to the reader by preventing concentration and understanding of the content. They can also be strongly encouraged to be more accurate if assignments are returned to them until they are rewritten with 100 percent accuracy.

## ORAL COMMUNICATION

A speech course is not required in all schools; therefore, many students have had little or no training in oral communication. Even if they have had a speech course, they need to continue to practice the skill just as they must practice if they want to maintain and improve writing skill.

Surveys of businesses reveal that oral communication is used about 70 percent of the day by the majority of the employees, yet employers are unhappy about the effectiveness of the oral communication that takes place when employees are involved in face-to-face conversations with the public, telephone conversations, and horizontal and vertical communication within the organizational structure. Recommendations are being made by communication researchers to increase the emphasis on oral activities in the business communication course.

From 20 to 30 percent of the course grade should be allocated to oral communication activities. These activities may include listening (an oral

activity), introductions, presentations, group discussions, interviews, cases, and dictation exercises. The size of the class will determine which of these activities are most appropriate.

*Listening.* Numerous books and articles were published between 1955 and 1965 on listening. Teachers can use them to supplement the information contained in business communication texts and get ideas for training students to listen. The following are some objectives that can also be used as criteria for evaluating listening practices:

1. To look at the person speaking
2. To reflect through facial expression the same mood as that of the speaker
3. To avoid showing boredom or impatience
4. To allow the speaker to finish rather than breaking in with one's own comments
5. To show by gestures or facial expression an understanding of the speaker's message
6. To show by facial expression or body movement a lack of understanding of the speaker's message
7. To give the speaker feedback or paraphrase the message to show one's understanding
8. To interrupt politely if the speaker does not recognize the listener's lack of understanding as expressed by nonverbal cues.

*Introductions.* If introductions of each student by another student are scheduled the first two or three days of the course, the students become acquainted sooner, the classroom atmosphere is more relaxed, and teacher-student rapport is better. Some instruction should be given about how to make a proper and interesting introduction so that the students will know how to perform the task effectively. Since this activity is their first talk before the entire group, it is best not to evaluate it for a grade. The teacher may make general remarks about the effectiveness of the introductions when they have been completed.

*Oral instructions.* The same information on written instructions provided earlier in this chapter should be reviewed with the students as they prepare to give oral instructions. The critique sheet for oral presentations included on page 274 will be helpful to use as they prepare their presentations. Students enjoy hearing their classmates tell how to make something. Students should use visual aids such as a flipchart, poster, or the object itself to illustrate their presentations. The elements on the critique sheet may be used to evaluate their activity.

*Oral presentations.* If the students prepare a written report for the course, the same material can be used as a basis for the oral presentation. Procedures for making a successful talk should be studied and discussed. Students should not be permitted to read the report or a written speech. A discussion of the critique sheet at the time the assignment is made will let the students know what is expected of them and how they will be evaluated.

*Interviewing.* The interview is playing a larger part in the employment process than ever before. Employers are trying to hire the right kind of

workers for their company because of the costs involved in hiring unqualified people and then having to replace them. The interview tells much more about an applicant as a whole person and about his or her oral communication skills than qualifications listed on the application blank, the letter of application, and employment tests. The interview also provides an opportunity for the applicant to sell himself and to secure information about the company.

To be prepared to be either the interviewee or the interviewer, students need to be acquainted with the interview process and have some practice performing both roles. The books and articles available on this topic are numerous. Students can be given reading assignments, or the teacher can give a short lecture and hand out interview guide sheets.

Role playing is especially pertinent for interviewing. Asking a business person who does interviewing to speak to the class and take part in the role playing makes the activity even more effective. A discussion of the kinds of questions to ask and how to ask them from both positions, as the interviewer and as the interviewee, should precede the role playing. The importance of sitting in an alert but relaxed posture, being friendly and courteous but not personal, being tactful, and having a good attitude should be stressed. Students can probably describe some interview experiences they have had. Since a panel of three or four interviewers is often used in an actual business situation, a panel of students can interview one or two students as a simulation activity.

CRITIQUE SHEET

Student Name_____ Topic_____

| ELEMENTS | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| 1. Purpose | | | | | |
| 2. Organization | | | | | |
| 3. Good opening | | | | | |
| 4. General style: vivid, direct | | | | | |
| 5. Smooth transitions | | | | | |
| 6. Facts and evidence | | | | | |
| 7. Posture: poised, erect | | | | | |
| 8. Personality: enthusiastic, confident | | | | | |
| 9. Volume: loud and clear, can be heard by all | | | | | |
| 10. Pitch and tone | | | | | |
| 11. Eye contact | | | | | |
| 12. Variety of tone and tempo | | | | | |
| 13. Mannerisms: ah's, you know's | | | | | |
| 14. Enunciation | | | | | |
| 15. Effective gestures | | | | | |
| 16. Dictation | | | | | |
| 17. Grammar | | | | | |
| 18. Effective pauses | | | | | |
| 19. Emphatic close | | | | | |
| 20. Overall impression | | | | | |

5 Excellent, 4 Very good, 3 Good, 2 Fair, 1 Poor

Grade _____

Evaluation can be based on the class discussion of each interview. The guide sheets can be used for a teacher-student evaluation if time is sufficient for all students to be interviewers or interviewees.

*Oral cases.* Skills in asking questions, analyzing, listening attentively, distinguishing significant from insignificant factors, controlling emotions, and summarizing are developed through the oral case method of teaching. Students like case studies because they seem more relevant than the text. More participation is required; therefore, preparation before class is necessary and students tend to study regularly rather than to study in massive doses just before taking tests. Students also develop their capacity to understand and appreciate classmates as they gain and share experiences.

If the class is large and discussion groups are used, students also have opportunities to serve as a member, a discussion leader, or an observer-reporter. Tape-recorded voices of students, or someone outside of class for that matter, doing a characterization may be played during individual or group presentations of cases to add to the interest. Student group discussions may be taped in order to give feedback and to show students whether they are thinking and speaking clearly.

Cases should be selected according to the concepts the teacher wants the students to learn for each class session. Also, short cases should be used so that issues, alternatives, and solutions can be decided upon in one session; otherwise, students lose interest. Videotapes add further variety and drama to the activity. The tapes of the role-playing activities help students learn to express themselves effectively.

To evaluate students in this activity, the teacher should have a card for each student. As soon as the class meeting is over, comments regarding his or her participation should be written on each student's card. The quality of the contribution can be judged by the pertinency of the comments as suggested by the objectives for solving case problems presented in an earlier section of this chapter. Remarks made by the students should be relative to the issue being discussed, should be specific, and should be points not already presented. Getting appraisal from the students on the methods used and their performance can help the teacher in making evaluations as well as help the students see how they can improve the next time.

*Dictating.* Students need to learn how to dictate correctly so that they will not be among those individuals who are furnished dictation machines or secretaries but elect to write their letters in longhand to be read aloud to a machine or given to the secretary to be typed. After the students have written a few letters, it is time to study good dictating procedures. A chapter dealing with dictation techniques is usually included in the text.

A teacher demonstration on how to record a letter on a dictation machine, with emphasis on how to make corrections, is helpful. Then students can try dictating by reading a letter they have written or a letter from the text into the microphone. They should play back the tape immediately in order to evaluate themselves on their enunciation, tone, volume, and pace.

Then students can make brief notes or even a complete sentence for a difficult thought and dictate a letter, remembering that thinking should precede speaking. When they feel they have had sufficient practice, students should make a tape to be evaluated by the teacher. The teacher can listen to the tape and tell the student the good and bad features as they relate to dictating procedures. The student then listens to the tape, and a discussion between the teacher and student follows, at which time a grade may be determined for the activity.

## NONVERBAL COMMUNICATION

Since business communication teachers' goals are to help their students become better communicators in the broad sense of the word, an effort should be made to teach students to use all the knowledge they can obtain practicably concerning a communication event. Writing, reading, listening, and speaking provide knowledge needed to communicate, but nonverbal communication makes up a large part of meaning; thus awareness and interpretation in this area are necessary to complete the skills needed for improvement in communicating.

Although business communication textbooks touch upon this subject only lightly, the research and literature available are growing rapidly. Teachers and students can learn from reading and discussing nonverbal cues how to observe and interpret them. Recognizing that nonverbal cues are faster than verbal ones and that they often contradict verbal messages results in better communication.

Evaluation of this knowledge can be included in tests on the theory, process, and barriers to communication. Some methods that may be used to teach nonverbal communication include viewing films or videotapes, looking at pictures, role playing, and responding to nonverbal cues given by students as they make oral presentations. Such factors as body movements, facial expressions, touch, voice, actions, space, silence, and perhaps even time and possessions can be observed. As the students are watching, they can write down the cues they identify, describe them, give their actions, and interpret the cues. Then a comparison of their sensitivities can be used to indicate the differences among individuals in this area. Since tests to determine sensitivity to nonverbal cues have been designed and successfully used, they may be on the market soon. In the meantime, with study and practice, students may develop and measure their own sensitivity in an empirical manner. If a grade is established for this activity, it can be averaged in as a part of the oral communication segment of the total grade.

## FINAL STUDENT EVALUATION

Individual circumstances will often determine how student achievement should be assessed in the business communication course. The model shown may serve as a helpful guide to inexperienced teachers. As such teachers gain experience, they will undoubtedly want to modify the grading plan to meet their own needs.

## A MODEL FOR DETERMINING THE BUSINESS COMMUNICATION COURSE GRADE

| ASSIGNMENTS AND TESTS | PERCENT OF TOTAL GRADE |
|---|---|
| WRITTEN | |
| Letters | |
| Memorandums | |
| Abstracts | |
| Definitions | |
| Summaries | |
| Instructions | |
| Cases | 30 |
| ORAL | |
| Listening | |
| Instructions | |
| Presentations | |
| Cases | |
| Interviewing | |
| Dictating | 20 |
| REPORTS AND PROPOSALS | |
| Medium-length Report or Proposal or Short Report and Letter Proposal | 20 |
| TESTS | |
| Quizzes on chapters and handouts | |
| Tests on theory, semantics, barriers, nonverbal communication, review of chapters | |
| Final examination | 30 |

## CONCLUSION

The inexperienced teacher will find that business communication can be a most exciting and rewarding course to teach. The course content is varied and lends itself to a variety of teaching methods and materials. As students become aware of the increasing concern of employers about improving communication effectiveness, they come to the business communication course with an intrinsic desire to improve their communication skills. These students are genuinely appreciative for those course activities that enable them to fulfill this goal.

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